

**Survey of Technology Enhanced Learning
Models and Best Practices from Other
Jurisdictions**

**For
Post Secondary Education and Skills Training
And the
Network of TEL Services for Rural and Northern
Saskatchewan Implementation Plan Working Group**

**By
Chris Bailey
Bailey Consulting Group**

March 2001

Table of Contents

	Page
Executive Summary	1
Methodology	2
Analysis of Findings	5
1. Services and Programs	5
2. TEL Infrastructure and Support	11
3. Planning and Coordination	12
Phase II: Survey of Direct Providers	15
1. Introduction	15
2. Methodology	16
3. Analysis of Findings	17
4. Discussion	19
Appendices	
Appendix A: Interview Schedule	A-i
Appendix B: British Columbia	
• Open Learning Agency	B-i
• C2T2	B-v
• University College of the Cariboo	B-vii
• Distance Education Learning Centre	B-xii
Appendix C: Alberta	
• Athabasca University	C-i
Appendix D: Manitoba	
• University of Manitoba	D-i
• Campus Manitoba	D-v
Appendix E: Ontario	
• Contact North	E-i
• Lakehead University	E-iii
• North West Video Conferencing Consortium	E-vi
Appendix F: New Brunswick	
• TeleEducation NB	F-i
• Connect NB	F-v
Appendix G: Newfoundland	
• Open Learning and Information Network	G-i
• Memorial University	G-iii
Appendix H: Minnesota	
• Minnesota Virtual University	H-i
• Lake Superior College	H-iii
Appendix I: Kentucky	
• Kentucky Virtual University	I-i
Appendix J: Western United States	
• Western Governors University	J-i
Appendix K: Australia	
• Open Learning Agency	K-i
Appendix L: Contact List	L-i

Survey of Technology Enhanced Learning Models and Best Practices from Other Jurisdictions

Executive Summary

The Survey of Technology Enhanced Learning Models and Best Practices from Other Jurisdictions was conducted for Post Secondary Education and Skills Training and the Network of TEL Services for Rural and Northern Saskatchewan Implementation Plan Working Group. Fifteen respondents from ten jurisdictions were interviewed in the period from January 8, 2001 through February 2, 2001.

The Internet was universally seen as the technology of the future. It combines the advantages of other technologies (text, audio and video) with greater flexibility, accessibility and lower costs. At the same time there were cautions to not let the technology drive the process. There will always be circumstances which dictate the use of other technologies.

Another theme, which kept surfacing, was the need to provide human contact and support systems. Distance education (regardless of the technology used) can have low completion rates. The use of remote learning centres, mentors and tutors were among the strategies employed to support distance students.

In many distance education programs there are as many on-campus students as truly distance students. These two groups, however, have somewhat different needs. Many on-campus students are looking for the occasional distance education course to supplement their on-campus course load. True distance education students often are looking for full degree and certificate programs.

In most jurisdictions the development of online courses is driven by individual institutions. And within institutions it is often driven by individual academic departments and instructors. This has led to the uneven development of online courses, over development in some areas and underdevelopment in others. There is a growing trend towards greater planning at the institutional level and at the jurisdictional level.

Many respondents reported a reluctance among some instructors to get involved in the development of online course and programs. Reasons cited for this reluctance ranged from: a) natural conservatism; b) unfamiliarity with the technology; c) indifference to the needs of distance students; d) a fear that technology threatens jobs.

Technology Enhanced Learning (TEL) was seen as a force for democratising education and leading to a more consumer centred approach to providing education. Many respondents see a day where students can custom build their

education plan using resources from around the globe. Technology alone will not drive this shift. Organisational issues such as comparable learning objectives, credit recognition, articulation and accreditation will also need to be resolved.

Finally many respondents saw a change in thinking from distance education to distributive education. This change in orientation was in response to such factors as: a) the convergence between the distance student and the on-campus student; b) the use of technology to supplement both on-campus and distance courses/programs; c) the trend towards consumer centred programming.

Methodology

Research for the Survey of Technology Enhanced Learning Models and Best Practices from Other Jurisdictions consisted of a survey of ten exemplary organisations which provide services and programs to help learners identify, access, participate and succeed in education and training, using TEL.

The research project was divided into a series of tasks. These tasks were:

1. identifying jurisdictions and respondents;
2. identifying relevant Internet sites, papers and research;
3. background research:
 - review of internet sites;
 - review of relevant papers and research;
4. contacting identified name(s):
 - provide brief overview of project;
 - identify contact's field of expertise;
 - identify other contact names;
 - determine interview time;
5. pre-interview activities:
 - forward survey;
 - request any supportive written information;
6. conducting interviews;
7. analysis:
 - provide overview of responses;
 - identify trends and analyse responses & background information;
 - organise material relative to the needs of Regional Colleges;
 - ask and answer the following (within a TEL perspective):
 - how do jurisdictions ensure excellence in content and delivery modes/methods?;

- how do they maximise student success?;
 - what are the associated costs and revenues?;
 - what do they predict for the future?;
8. review draft report;
 9. submit final report.

Each interview was designed to last between 60 and 90 minutes. Respondents were asked questions related to the following topics:

- services and programs;
 - pre-enrolment learner services
 - curriculum;
 - support for users
 - employment services
 - community services
- TEL infrastructure and support
- planning and co-ordination.

The complete interview schedule can be found in Appendix A.

In total ten jurisdictions were surveyed and fifteen interviews conducted. It was recognised that the respondent may not be able to fully answer all questions. It also became apparent during the interviews that the interview schedule was very comprehensive and difficult to cover all material in 90 minutes. Consequently each interview did not necessarily cover all interview areas. The interviews focused on the respondent's expertise and additional contacts were identified where applicable.

All interview notes were taken by hand and later transcribed onto Microsoft Word. The findings of the interviews were analysed, using a constant comparative method to identify thematic content. Specifically comments were analysed to determine essence of thought. Areas of diversity were also identified. Transcripts of all interviews can be found in the appendices.

The 15 interviews took place between January 8 and February 2, 2001. An overview of the jurisdictions contacted, respondent names and institutions of respondents and interview dates are listed below:

Jurisdiction	Institution	Contact	Date
British Columbia	Open Learning Agency	David Porter	January 24, 2001
	C2T2	Amanda Harby	January 15, 2001
	University College of the Cariboo	Adrian Kershaw	January 15, 2001
Alberta	Athabasca University	Clive Keen	January 8, 2001
Manitoba	University of Manitoba	Lori Wallace	February 2, 2001
Ontario	Contact North	Debby Sefton	January 8, 2001
	Lakehead University	Gwen Wojda	January 25, 2001
New Brunswick	Teleducation NB	Rory McGreal	January 15, 2001
Newfoundland	Open Learning and Information Network	Genevieve Gallant	January 10, 2002
	Memorial University	Glen Penny	January 18, 2001
Minnesota	Minnesota Virtual University	Gary Langer	January 9, 2001
	Lake Superior College	Barry Dahl	January 19, 2001
Kentucky	Kentucky Virtual University	Myk Garn	January 25, 2001
Western United States	Western Governors' University	Amy Terjal	January 18, 2001
Australia	Open Learning Agency	Jim Beck	January 18, 2002

Analysis of Findings

1. Services and Programs

- **Pre-Enrolment Learner Services**

Most jurisdictions do not devote a lot of energy to assessing and counselling potential students for distance education and/or online learning. Students apply and are accepted for distance education programs using the same criteria used for on-campus applications. There are some exceptions. The Western Governors University (WGU) places significant emphasis on pre-enrolment assessment. Prospective students go through an intake interview to determine educational level and needs. Students are then assigned a mentor who works with the them to develop an academic action plan. This process is costly. WGU charges \$3,500 (US) to cover it's administrative and support services (both pre-enrolment and ongoing).

Many distance education providers do, however, have written and web based material pre-enrolment material which can include self-assessments, a checklist of what to expect and/or a self directed tutorial.

Success rates for distance education courses were estimated to be as low as 33%. There are a number of potential reasons for this. Comfort with the technology, however, does not appear to be one. For example, the Open Learning and Information Network in Newfoundland had developed tools for students to learn to use computers. They found that recent students were already coming to the program computer literate. It was also noted that most software is relatively easy to use and can be learned with minimal help.

Where attention is being focused is on more personal learner support. Distance education providers with strong support programs often claimed significant increases in success rates. This area is more fully explored further under • **Support for Users.**

Some jurisdictions and institutions are quite involved in credit brokering. For some its even part of their business plan. They see a potential to market their course and programs worldwide. Revenues generated from the worldwide distribution of online courses and programs could create a positive revenue stream for the institution. Others caution that there will soon be a glut of online courses on the market. Consequently it will be more difficult to market courses

and make money off them. At the same time, it will be relatively easy and cheap to purchase/lease already existing courses. A few people interviewed went so far as to suggest that we need very few online courses and it is unnecessary for institutions to compete with each other. Instead there should be a mechanism to produce universally transferable, acceptable and accessible online courses which would be available to institutions and individual learners across the globe.

There is then no coherent trend when it comes to credit brokering and credit assessment except to the extent that the two go together. For example, credit brokering institutions such as the Open Learning Agency in British Columbia, the Open Learning Agency in Australia and Kentucky Virtual University are also involved in credit assessment. These institutions typically charge a fee for assessing credit. Teleducation NB and Athabasca University also provide credit assessments. Teleducation NB, whose assessment is part of its role with Prior Learning Assessment Recognition (PLAR), charges about \$200. Athabasca University will assess credits of Athabasca students for \$50 once they have taken two courses. If they do not take any courses the cost is \$250. This is because they have had problems with people asking for credit assessments and then not enrolling. They find this expensive and want to discourage the practice.

Credit brokering institutions tend to be located in jurisdictions which have developed an intra-institutional distance education strategy. The credit brokering institutions often act as an umbrella organisation for a consortium of institutions. For example, students working through the B.C. OLA have an array of courses from a number of institutions from which to choose. Credit transfer is facilitated by an articulation process which has already assessed programs. Consequently the student already knows which classes are transferable. Nonetheless, in most cases, students still have to attach themselves to a single degree granting institution. Moreover, most institutions require a certain percentage of courses be taken through that institution before a degree will be granted.

A well developed articulation process or other means of assessing credits is often associated with a truly flexible distance education process. However, even in jurisdictions with well-developed articulation programs progress has only gone so far. In British Columbia, for example, their articulation program only covers on-campus courses for two-year degree granting institutions. Moreover, many respondents noted a reluctance by many institutions to get involved in collaborative credit assessing processes.

No jurisdiction has special financial support arrangements for distance students. Distance students can access the same financial support systems that are available to on-campus students.

Privacy is an important consideration in all jurisdictions. All jurisdictions have security systems, typically based on password protection applications. Most respondents thought they had sufficient privacy protection and did not identify any pressing privacy issues. Some did note, however, that a persistent hacker could breach their system.

Costs associated with pre-enrolment are most often absorbed within the overall institutional budget and recouped through tuition fees. The OLA in Australia projects pre-enrolment costs to be about \$5.00 (AU) per student per year.

- **Curriculum**

There are few full programs which are completely online. Many of the online courses are only partially online. The instructor or academic department initiates course development in most cases. Online development, therefore, is dependent upon the interest and initiative of individuals. This can lead to the uneven development of courses. Some institutions require the instructors to apply to a central committee to develop an online course.

Course development varies across jurisdictions and institutions. At one end instructors are given some training and develop the course themselves. This is a low cost option. One institution cited a \$1,500 cost per course. At the other end is a development team approach which can include a design specialist, content specialist, technical specialist and even a graphic artist. Costs for developing courses under this model range from \$20,000 to \$75,000 for a typical course to \$300,000 plus for more technically demanding courses.

Maybe somewhat surprisingly many people interviewed expressed caution regarding the development of online courses. They cautioned that delivery needs and learning objectives should dictate development not technology. As one respondent noted no matter what technology can provide, reading will still be the backbone of most academic courses¹. Moreover, there were fears that over the next while there will be an explosion of poorly made online courses.

Some jurisdictions are moving toward a more planned approach to online course development. Programs and study areas being targeted for development are those that best meet overall student and institutional needs and objectives.

¹ Clive Keen, Athabasca University

Three basic distance education students types were identified: a) those who are taking courses for general interest; b) those who are filling in the holes of a partially completed program; and c) those who are looking for a complete program. Some respondents identified the post graduate field as the one with the greatest demand for full distance programs. These students were characterised as working towards a degree for career enhancement reasons.

Online course development is usually not done to meet the needs of distance education students. They develop online courses to meet the needs of their on-campus students. These students are not interested in taking their programs fully online. On-campus students enrol in online courses:

- to complement their on-site courses;
- for convenience;
- because onsite courses are full;
- to fit with their work schedule, etc.

Many true distance education students, however, want a full program at a distance. As noted above, however, there are limited full program opportunities, especially at the under graduate level. This will only change when online course providers focus on meeting the needs of the true distance student.

Academic online courses seem to be most developed in the following areas:

- liberal arts (in some jurisdictions students can acquire their first two years at a distance, others offer full degrees);
- business/administration (at both the technical and professional levels);
- information technology;
- health sciences (often at the technical rather than professional level).

It should be noted that at this time online learning still represents only a fraction of curriculum developed for distance education. Paper based correspondence is still very widely used. Video and audio conferencing is also popular. There is, however, a general consensus that the Internet is the way of the future. Reasons for this view include:

- flexibility;
- allows for both synchronous and asynchronous transmission;
- world-wide accessibility;
- lower distribution and transmission costs.

Jurisdictions serving remote populations, however, are not foreseeing a quick move to the Internet. In remote communities, which rely on party lines or radiotelephone even basic telephone, access to the Internet is not even an option. In Northern Ontario, for example, only 41 have Internet access and 24 communities have video conferencing capability. Even fewer have access to high speed Internet. Moreover some communities have no public access Internet sites. Consequently Contact North in Ontario offer few online courses. Students, however, can use the Internet for research if it's available.

When discussing online course development the interview eventually and naturally turned to convergence. There are a number of ways of talking about convergence and a number of reasons why convergence is a ubiquitous topic:

- technologies are converging with single devices fulfilling many functions;
- the technology allows instructors, mentors, tutors, advisers, etc. to interact with on or off-campus students in relatively the same way;
- there is no typical student. Students can take courses on or off-campus and they can reside out of the region or even off-shore;
- the cost of developing a good online course is high which leads to talk of collaborative development arrangements;
- high production and development costs also direct online providers towards an inclusive marketing strategy.

- **Support for Users**

Learner support services can be quite extensive. A major service is library services. Estimated costs for providing online library services range from \$200,000 to \$400,000 per year. Jurisdictions and institutions also provide a range of other services such as mentors and tutors, help desks (assessable through telephone and/or email), online student information, online registration, online catalogues, organisational information, etc. The University of Manitoba, for example, budgets about \$2,600,000 per year to support its Distance Education program. The \$2,600,000 covers all costs, including curriculum development. Staffing of the program includes:

- 1.5 library;
- 3 student services;
- 1 student advisor;
- 1 programmer;
- 1 desktop publisher;
- 1 editor;
- 3 instructional designers;
- 1 financial advisor;
- 2 administrative assistants.

Most jurisdictions expect students to supply their own computer or gain access through a community access site. Some jurisdictions work with community access sites to increase students access to those computers.

The assumption that most students will access their own computer leads to developing courses with minimal technology requirements such as:

- Pentium II class computer;
- sound card;
- Netscape 4.0 or equivalent browser;
- 28800 or 56600 modem connection;

Technical support may be through the instructor but this is often cited as being insufficient. Some institutions have technical help desks available over the telephone and/or Internet.

Most respondents believed the platform software was simple enough that no, or minimal, technical training was required. Some have self-directed tutorials on their Website. Some have developed training courses and tutorials but in most instances they are no longer used.

One area of technical training which was identified was for instructors. Instructors require training to increase their expertise and to popularise online course development. University College of the Cariboo (UCC), for example, has allocated \$250,000 towards staff training in information technology (IT).

More attention is being focused on personal learner support. Student success rates in distance education environments can be quite low. There is general, although not universal, recognition that elements of human contact and support should be incorporated into the distance education experience. Some jurisdictions are experimenting with learning centres which, in various ways, bring distance learners into a central location. At the centre they can access the technology but more importantly they can access personal support. UCC, for example, is piloting a Distance Education Learning Study Centre which is now in its third year. The Centre provides a suite of services including academic advice, mentoring/tutoring, financial support, technical support, study skills training and library material. Students also use the centre to interact with fellow students.

Other methods to increase contact are to assign each student a mentor and/or tutor. Part of this person's responsibility is to keep in touch with the student and address concerns and problems before they overwhelm the student. Various

technologies are also employed to extend the human touch. Examples included bulletin boards, whiteboards, audio and visual conferencing, etc.

For the most part learner support costs are factored into overall institutional budgets. Indeed some institutions are mandated to ensure distance education is no more expensive (and potentially cheaper) than on-campus study. There are some exceptions. Memorial University, for example, charges \$12 per credit (typically \$36 per course) to offset the cost of course material.

- **Employment and Community Services**

Most jurisdictions provide minimal employment support to distance students. Most often distance students must access on-campus services provided to the general student population. Three notable exceptions are:

- Athabasca University's Website has many employment related links. They are also developing a system where students can register and provide information about themselves (i.e. resume) to employers. This will be expensive and will be developed by a private firm;
- Teleducation NB works closely with community colleges and has achieved about an 80% placement rate. They also work with private industry to ensure courses meet industry needs and that the number of seats available reflects employment opportunities;
- OLA British Columbia has Community Skill Centres working with people in career transition. They supply labour market information and employment related courses. It should be noted that this service does not extend to technical and university level students.

2. TEL Infrastructure and Support

- **Platform and Technology Standards**

Some jurisdictions and institutions have a standard delivery platform on order to:

- contain costs;
- limit technical support problems;
- ease student frustration.

Others allowed course developers to determine the platform they used. They were against a standard because:

- learning objectives should dictate the platform used;
- technology is changes so rapidly that standards will always be out of date;
- they are in the early stages of online course development and it is important to experiment and try out new technologies and methods;
- most platforms are sufficiently easy to master that it is a minor inconvenience to students.

Standards or no there does appear to be an informal consensus regarding delivery platforms. The majority of people interviewed said WebCT was either the standard platform or the more popular platform option.

- **Technical Support**

Some institutions provide minimal technical support to instructors who are developing and delivering online courses. This situation tends to be the exception rather than the rule. Most jurisdictions and institutions believe that a strong IT department is essential to the development and delivery of online courses and programs. The University of Manitoba Distance Education program budgets between \$60,000 to \$100,000/year for technical support. OLA Australia budgets about \$120,000/year (AU) for technical support and another \$300,000/year (AU) for software maintenance.

3. Planning and Co-ordination

- *How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?*

There are jurisdictions which take a *laissez faire* approach to TEL development. There are those which take a planned approach. And there are those somewhere between the two. Most jurisdictions are moving toward a more strategic approach to the planning, development and delivery of TEL services.

The consortium, a popular planning model, can have a variety of roles such as:

- strategic planning and policy development;
- managing pilot/experimental projects;

- product development;
- infrastructure development/maintenance;
- promotion, communication and marketing;
- information exchange/networking;
- funding.

Many respondents noted that online course development was directed to campus students. Some went on to argue that the true distance market (unless that market is defined as national or international) is not large enough to economically justify comprehensive online course development. Online course development, in their eyes, can only be economically justified when targeted to both on-campus and off-campus students.

- *How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?*

Most jurisdictions are moving toward a standardised approach to infrastructure development. There is a strong minority, however, who want open standards particularly at this stage in the evolution of online educational technologies.

Technology costs are a big issue. Different institutions relate to technology costs differently. Some see technology as an add-on to the regular educational costs and online course development are seen as a cost drain. Other institutions see the technology as a means of delivering cost effective and efficient education. These jurisdictions tend to see online course development as cost neutral or as a cost saver. A few jurisdictions see technology as a revenue generator. They have business plans which identify online course development as a means of making money. This can include leasing/brokering courses, marketing to an international student body and/or supplying private industry training needs.

- *How are TEL technical support services planned, co-ordinated and funded? What works well? Why? What problems and issues have been identified?*

TEL technical support services tend to be centralised within institutions. Although it is not uncommon for technical support staff to also be attached to online course development units. Funding comes from three typical sources:

- institutional operating budget;
- government funding initiatives;
- partnerships with private industry.

- *What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?*

The most often identified challenge to more co-ordinated arrangements, and even to online course development, was instructor reluctance. In some cases this was characterised as the natural conservatism of educational institutions. In other cases this was characterised as turf protection.

Some respondents also identified restraints related to being public institutions. They operate under government defined mandates which can restrict options. Obtaining development funding, especially venture capital, can be problematic. Moreover they exist within a corporate culture which does not understand or embrace marketing principles.

- *What are your overall plans for the future TEL developments? Realistic and optimistic.*

Online education is the way of the future. It is cheaper, more flexible and more accessible than many other forms of distance education. It is also more powerful than most other technologies.

Convergence and growth were two themes which came up repeatedly in the interviews. Convergence will take many forms. There will be a growing convergence in technology. There will be a growing convergence of delivery methods for both on-campus and off-campus students. There will be a growing convergence in content development as more collaboration takes place.

There will also be a growth in the number of students taking online courses. This will be accompanied with an increase in the number of course and program offerings. Some believe, however, that there will be an inevitable consolidation of options as the better and more consumer centred services, courses and programs come to dominate the market place.

Some respondents also identified the inherently democratising influence of the Internet. Students will be able to go wherever they like for their education. This will lead to increasing competition for students and an increasing need to respond to students needs and desires.

All of these developments foreshadow a shift from distance education to distributive education. A time when students will have access to flexible and

adaptable delivery modes and technologies. This consumer centred approach will encourage greater flexibility, customisation and more options.

Phase II: Survey of Direct Providers

1. Introduction

Upon completion of the survey of jurisdictions it was decided to explore a little deeper. Four more interviews were conducted, this time with direct providers of services to distance learners. Initially providers from Manitoba, Ontario, New Brunswick and Newfoundland were selected. As it turned out it was not possible to make contact with a Newfoundland provider. A British Columbia provider was substituted. The providers interviewed were:

Jurisdiction	Institution	Contact	Location	Date
British Columbia	Distance Education Learning Centre, UCC	Don Kinasewich	Hundred Mile House	February 23/01
Manitoba	Campus Manitoba	David Rehaluk	Dauphin	February 28/01
Ontario	NW Video Conf. Consortium	Dell Schmucker	Dryden	February 23/01
New Brunswick	Connect NB	David Roberts	Fredericton	February 15/01

2. Methodology

Those who had participated in the survey of jurisdictions were contacted and asked for leads for Phase II interviews. The leads were contacted and asked to participate in the survey. Each participant was emailed the interview questions in advance of the interview. The interview consisted of the following questions:

1. Describe the mandate, role and organization of the centre.
2. Specifically what services does the centre provide relative to:
 - pre-enrolment support;
 - study skills training;
 - study support;
 - technical training;
 - technical support?
 - Are the services (or tools) freely available, available as “open source” or shareware, for purchase, through broker arrangements?
 - What services/tools are required but not currently available?
3. Who uses the services?

Characteristics	Youth	Adults	Older Workers	Seniors
Socio-economic				
Human Rights info (if available in aggregate form): - Gender - Race - Disability				
Academic: - Basic Education - Post-secondary skills and training - Post-secondary undergraduate - Post-secondary graduate				
Access to computers				
Ability to use computers				

4. What is level of support is required by students (by characteristic)? Does the level of intensity change over time?
 - technical support;
 - academic support;
 - study support.
5. How are the centre's services and programs co-ordinated/shared between the home institution and the remote site?
6. What is the centre's relationship with the K-12 system?
7. What are the other services provided at the centre? How do these services blend or co-ordinate with their educational services?
8. Other.

The four interviews were conducted between February 15 and February 28, 2001. Interviews lasted from 60 to 90 minutes. Interview notes were taken by hand and later transcribed onto Microsoft Word. The findings of the interviews were analysed, using a constant comparative method to identify thematic content. Specifically comments were analysed to determine essence of thought. Areas of diversity were also identified. Transcripts of all interviews can be found in the appendices.

3. Analysis of Findings

Three of the four sites interviewed (British Columbia, Manitoba and Ontario) had fairly narrow mandates dedicated solely to education related activities. The exception, New Brunswick, had a community access orientation with a strong entrepreneurial component.

The organisation of the sites followed a similar pattern. Typically they:

- were located in a local educational facility, typically a high school;
- provided distance learners access to technology and support;
- served onsite students;
- had little, or no, contact with learners studying from home.

Campus Manitoba and the Distance Education Learning Centre in B.C. were quite strong in pre-enrolment, study skills and study support services. This is

probably due to each site being operated by an education provider. Even so Campus Manitoba students were sometimes referred to private fee-for-service tutors when the site staff did not possess the specific academic expertise. At Connect NB the need for student support was also recognised. They are piloting a virtual mentor concept. The virtual mentor will be able to interact with the student on site and at his/her home.

All sites considered technical training an important service component. One site spoke of 'trying to embrace the student in an inviting culture of technology.'² This focus on technical training was not because the technology was considered to be difficult to learn. On the contrary the technology was seen as fairly easy to master and not particularly time consuming to teach. Nonetheless the site staff were all quite concerned about the potential for the technology to be a barrier to the student. This was because many of their students were not computer literate. It was recognised that if these students were to become comfortable using the technology they needed support and encouragement.

Only three sites (B.C., Manitoba and New Brunswick) kept any demographic accounting of the adult students using their facilities. These sites tended to attract a mix of students by age, with seniors usually being the least represented. In B.C. the student base was strongly skewed towards laid-off workers who were enrolled in retraining/upgrading programs. New Brunswick had a similar profile with, most students earning incomes below the provincial average. All stated that women (60% to 75%) used the site more than men. None of the sites had engaged the disabilities' communities to any degree. And while the information was quite spotty it would appear that few site users were of aboriginal descent.

The sites' relationship with education providers varied. Manitoba had the closest relationship. The Campus Manitoba sites provide access only to courses delivered or authorised by the three provincial universities³. The next closest relationship was between the University College of the Cariboo (UCC) and the Distance Education Learning Centre in British Columbia. The Centre is a fully funded service offered by UCC. The Centre, however, had considerable autonomy in how it organised itself and had discretion in the courses it offered. Connect NB was structured independently from any education provider. And, while Connect NB had a close relationship with TeleEducation NB it was a co-operative peer-to-peer relationship. The North West Video Conferencing Consortium in Ontario was operated by local district school boards. The

² David Roberts, Connect NB

³ They also offer courses from Athabasca University but this was a decision of the participating universities and not of the remote sites.

consortium had no role or interest in post secondary education. It did, however, provide facility resources to Lakehead University.

All sites had co-operative relationships with the K-12 system⁴. For example:

- the typical location for a site was a local high school;
- many shared information and resources with the K-12 system;
- sometimes tutorial support was supplied by high school teachers;
- many had regular contact with the high school principals and counsellors;
- some made regular recruiting trips to area high schools.

Except for Connect NB the sites offered only educational related services, although the breadth of educational options varied among sites. Campus Manitoba exclusively offered university level training. The B.C. and Ontario sites offered access to a broader range of educational options, with a concentration on adult basic education and upgrading. As noted above Connect NB had a very different model. The range of services they offered was wide and varied. This was due to the unique role and mandate of Connect NB which:

- was based on community ownership;
- focused on bringing technology to rural New Brunswick;
- relied on revenue generation to maintain the site;
- encouraged an entrepreneurial orientation to service provision.

4. Discussion

All four sites had fairly distinct service visions. Five strategic service visions were identified among the four sites. These strategic visions were to:

- be a conduit for distance educational products (Manitoba and B.C.);
- meet the educational needs of distance learners (Manitoba, New Brunswick and B.C.);
- provide technology and technical support to distance locations (Manitoba, New Brunswick and B.C.);
- serve community wide needs (New Brunswick);
- meet the administrative needs of district organisations (Ontario).

⁴ In deed, the North West Video Conferencing Consortium was directly owned by local school districts

Generally speaking the sites' target population were people coming to the site to access the technology. People accessing online courses from home usually had little contact with the site. The site staff would not even know many of these students. It is apparent that the sites surveyed were not designed, nor were they intended, to be the sole provider or conduit of distance education for their region. The Distance Education Learning Centre in B.C. was probably the most conscious of this reality. Nonetheless it was the only strictly educational site which also had a mandate to serve the needs of anybody in the community involved in distance education, including those not coming to the site.

The technical literacy of students was not a major concern, even though all sites dealt with students who were computer illiterate, or even phobic. Most site staff claimed that the technology was not difficult to master. And, if handled properly, the students' fears and experiences were not a barrier to accessing the technology. The key to getting students comfortable with the technology appears to be a lot of handholding and support at the front end and assurances of readily available support at the backend.

It was in the area of academic/student support that most difficulties were identified. The Distance Education Learning Centre in B.C. noted, for example, "a high and ongoing need for academic support" and that "a lot of learners would benefit from face-to-face contact with instructors." The virtual mentor, being piloted by Connect NB, was intended, in part, to "help the student feel connected to the educational experience."

It would have been instructive if one of the sites had supplied academic/student support services to students taking courses from home. According to one interview they had found the level of academic/student support from course providers to be very uneven – some were very good and some were not.⁵ Would the provision of local academic/student support services have proven to be superior, or at least complementary, to the academic/student support supplied by the educational institute providing the course?

⁵ Distance Education Learning Centre, B.C.

Appendix A:

Interview Schedule

1. Services and Programs

- Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Service/Program (description)	Client (who uses the service: number; demographic information; eligibility criteria)	Delivery Method (how is the service/program delivered: on site/at a distance; one-on-one/group/workshop; Web site information and links, multi-mode)	Partnerships (how do the partners collaborate)	Cost (is the service/program free of charge, cost recovery, revenue generating)	Lessons Learned (successes, issues, what does not work; where are you going; where do you want to go?)
Pre-enrollment: (e.g. career/academic assessment/planning/counselling; assessing learning style of learners and suitability of TEL)					
Credit Brokering: work with multiple institutions to design individualized programs for students; credit assessment/transfer; locate/coordinate courses/programs; assistance with course/program registration; advocacy with education institutions					
Financial Support (e.g. access to or help in finding student loans, bursaries, scholarships and other income support)					
Academic Preparation: (study skills, especially related to self-directed/online learning; academic skills refresher)					
Privacy: have you identified any privacy issues related to TEL; what are you doing about them?					
Costs: what costs are associated with pre-enrollment learners services; how are they recuperated?					
Other					

- Curriculum: How do you ensure academic excellence?

Courses and programs overview: (courses and programs provided, including credit and non-credit programming; supporting policies, for example making 1 st and 2 nd year university available online)	
Purchased and/or brokered courses and programs: how are they evaluated for content, level, appropriateness of technology, learner support, learning style, etc.?	
Developed courses and programs: how do you determine content, level, appropriate technology, learner support, learning style, etc.?	
Costs: what costs are associated with curriculum development; how are they recuperated?	
Other	

- Support for Users – How do you maximize student success?

Learner Support: (study space; access to library resources; tutoring; mentoring; peer support; examination preparation and invigilation)	
Training: what/when is training provided; where is training provided (e.g. special facilities, on-site, online); how are users made aware of the services; what is the cost for the user; what partners are involved in designing/delivering the services	
Diverse Support Needs: support for with high, medium and low academic support needs; support for with high,	

<p>medium and low technical support needs; how does support change or track through the process (e.g. pre-enrollment, during studies, post graduation)</p>	
<p>Technical support: what/when is technical support provided (e.g. on-site, online, help desk); how does support change with different delivery methods; how are users made aware of the services; what partners are involved in delivering the services</p>	
<p>Online: what online services are provided (e.g. email, course registration, employee/student administration services, software programs); how are users made aware of the services; how are users supported; what partners are involved in delivering the services</p>	
<p>Impact of Technology: how do user supports change with different technologies and different delivery modes?</p>	
<p>Costs: what costs are associated with user support; how are they recuperated?</p>	
<p>Other</p>	

▪ **Employment Services**

Service (description of the service)	Client	Delivery Method	Partnerships	Cost	Lessons Learned
Labour Market Information: what do you do to identify labour market opportunities for graduates					
Access to Work: (e.g. virtual career fairs; online job postings; online resume postings)					
Access to Employers: are there relationships developed with potential employers (e.g. informational interviews, work placements, apprenticeships)					
Costs: what costs are associated with employment services; how are they recuperated?					
Other					

▪ **Community Services**

Service (description of the service)	Client	Delivery Method	Partnerships	Cost	Lessons Learned

TEL Infrastructure and Support

Facilities	Learners	Faculty and Staff	Public	Other	Lessons Learned
Computers: what is provide (e.g. computer on every desk; computer workstations/labs; laptop program; wired work areas); how are users made aware of service; what is the cost for the user; what partners are involved in delivering the services					
Delivery Platforms: which platforms are used in the TEL infrastructure; how did you determine which the platforms to use; are platforms being evaluated, changed, upgraded or supplemented					
Telecommunications: what level of access is available (e.g. modem/telephone line; network; broadband); how are users made aware of service; what is the cost for the user; what partners are involved in delivering the services					
Multimode: what communication modes are available (e.g. online, TV, audio/visual conferencing, phone/fax/email); what is the cost for the user; what partners are involved in delivering the services					
Course Options: are courses offered in different TEL modes; how many; types of options; future projections					
Support: how much technical support is needed to maintain infrastructure; how does support change with					

different delivery methods	
Costs: what costs are associated with employment services; how are they recuperated?	
Other	

3. Planning and Coordination

- How are TEL services and programs planned, coordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?
- How are TEL infrastructure, equipment and software planned, coordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?
- How are TEL technical support services planned, coordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?
- What organizational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organizational issues you are currently dealing with?
- What are your overall plans for the future TEL developments? Realistic and optimistic.

Appendix B:

British Columbia:

- | | | |
|--------------------------------------|----------------|-------------------|
| 1. Open Learning Agency | David Porter | January 24, 2001 |
| 2. C2T2 | Amanda Harby | January 15, 2001 |
| 3. University College of the Cariboo | Adrian Kershaw | January 15, 2001 |
| 4. University College of the Cariboo | Don Kinasewich | February 23, 2001 |

Date: January 24, 2001
Name: David Porter
Institution: Open Learning Agency
Location: British Columbia
Website: www.ola.bc.ca
Background: The Open Learning Agency (OLA) is an umbrella organisation developing distance and non-traditional learning opportunities. They work with communities, employers, and individuals. The OLA promotes lifelong learning opportunities, the provision of access, the development of instructional materials, and the educational use of technology in the provision of education and training.

2. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Prospective students are directed to a program advisor. The advisor will, depending on student needs/background, involve them in a credit assessment or Prior Learning Assessment Recognition (PLAR). The credit review service will do block credit transfer from other institutions. Within PLAR they will look at workplace training and will assess credit where applicable. People are charged for credit evaluation.

The OLA used to offer an academic preparation course but now provide general information on their Website. Information is also included in their handbook.

The OLA is developing privacy policies for students, instructors and staff. The staff and instructor unions are concerned with access to person information. The head Librarian is overseeing this policy review.

Curriculum: How do you ensure academic excellence?

The OLA has a strategic plan, which outlines areas for course and program development. A Task Force identifies priorities within the strategic plan. Program areas can also identify priority areas. Course development is done in a team which consists of content specialist, instructional designer, technical support and, when necessary, graphic artist. One of the first decisions is whether to develop their own course or license an already developed course. The course development team can also include external reviewers.

OLA consider they are providing distributive learning with the goal to fit the teaching to the student. The OLA offers courses from K to adult. They have undergraduate courses in liberal arts, business and health sciences. The OLA offer collaborative degrees in association with other institutions. They have a

limited selection Masters level courses. They also offer IT upgrading which can be laddered to technical certificates and diplomas.

Many courses are print based. The OLA's inventory of online courses is constantly growing. They also provide some face-to-face courses.

The average online course costs between \$25,000 and \$75,000 to develop. More technically sophisticated course can cost up to \$250,000. Costs are recouped through course licensing and tuitions. Of their \$65,000,000 operating budget \$45,000,000 is covered through revenues and the rest through government grants.

The OLA develops all courses in a flexible database using meta-tags. Courses can then be easily converted to paper or any number of online delivery platforms.

Support for Users – How do you maximise student success?

All student services are available online: library, help desk, technical support, Frequently Asked Questions (FAQ) and student advisors. Support is also available through a 1-800 number.

Examinations are conducted in examination centres. Some of these centres are operated by OLA and others are in partnership with other educational institutions. The OLA is moving away from examine based testing to project based testing.

The OLA attempts to provide courses which meet diverse student learning needs. They are involved in Adult Basic Education and have developed a lot of information regarding study skills. Part of the instructional design process is to determine who will take the course and then set language levels based on the student profiles. Accommodation needs for people with disabilities are factored into course development.

All student support costs are factored into course fees.

Employment Services

The OLA operates Community Skill Centres which are very active in employment services. These centres are designed for people in career transition. There are no similar services for other students although there is some employment information on the Website.

2. TEL Infrastructure and Support

OLA has standard content development, they do not have standards for content delivery. They believe if the course is developed for a specific platform the organisation is then locked into the platform. They have not found the perfect

platform and use the platform which best fits the needs of the course. The planning team may decide to experiment with a new platform. The underlying principle is developing content in a database which can be converted to text or online or whatever.

The IT Department has the mandate to support all technical facets of the infrastructure. They maintain the academic and administrative platforms. The IT department has about 30 staff. The IT Department, however, does not push the program.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

OLA has a planning process which is driven by the executive and the board. Planning is based on government mandate, research and the OLA business plan. Their planning system is the Balance Score Card developed at the Harvard Business School. This year the priority areas are business programs, IT, human services and BA completion.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

They have major technical projects underway. They are developing a campus pipeline, putting digital products into a common environment and developing a common technology platform for tutors.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

Public institutions are not very good at marketing. OLA partners with private companies (publishers, software developers, etc.) to help market material. There are a lot of offshore opportunities but the OLA is constrained by lack of resources and government priorities.

What are your overall plans for the future TEL developments? Realistic and optimistic.

The future lies in being customer focused and providing resources which best fit student needs. This implies the need to customise services to fit student/customer needs. They want to be a leader in flexible learning opportunities. The model for accessible, user directed services, should be

services like Napster and EBay where consumers can access an array of services and products and use those which work best for them.

The online education universe is expanding at a great rate. There are many valuable services and products already developed. New services and products are constantly superseding existing ones. The guiding principle should be “Don’t Build It – Rent It!”

Date: January 15, 2001
Name: Amanda Harby
Institution: C2T2
Location: British Columbia
Contact Info. www.ctt.bc.ca
Background: C2T2 is a provincially funded initiated which works with post secondary institutions, helping them develop innovative curriculum and technology.

1. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

C2T2 is not involved in pre-enrolment services.

Curriculum: How do you ensure academic excellence?

Each post-secondary institution in the province delivers its own online courses. Few course are leased or purchased from others, certainly not from private providers.

C2T2 is working with institutions to facilitate a provincially co-ordinating function for the development of online courses. There is a pilot project in Applied Business Technology. In this pilot some institutions develop courses while other institutions deliver them.

www.bccourses.com is a depository of multimedia (anything from online through to video) courses provided by two-year colleges and technical institutes in B.C. A few universities are included in the database. There are about 1,300 courses in the database, with about 250 being fully online.

Intellectual property rights can be a big concern. Does the material belong to the instructor or to the institution?

Copyright is also a concern. Distance students are not covered by the same copyright arrangements as on-campus students. Consequently access to material can be problematic.

Support for Users – How do you maximise student success?

They are currently working on a model for co-ordinated learner support services. Emerge is the policy body with this mandate. Some of the question being asked are:

- How will the information be presented online;

- How many institutions will be involved;
- How are they going to achieve institutional buy-in;
- How will they create a seamless environment?

Currently each institution provides its own learner support services and some have online services. Some institutions charge for their services, others do not. Pre-course orientation services vary a lot. In the Applied Business Technologies pilot project there is a free online learner course.

Support for learners with diverse needs is under development. In the Applied Business Technologies pilot project they have contracted for an assessment of how accessible its courses for the visually impaired.

Employment Services

C2T2 does not provide employment services

2. TEL Infrastructure and Support

The 28 provincial colleges, technical institutes and universities have 117 campuses. Most campuses have a computer and/or a learning centre. Moreover most public libraries have public Internet access points.

Generally speaking online course are developed with minimum technical requirements, although most require a PC instead of a MacIntosh.

Each institution determines which platform they are going to use. C2T2 has a licensing agreement with WebCT as way to reduce costs. They are not interested in developing platform standards because the standards change so quickly.

Institutions use a variety of technologies to support distance education activities. Online course can be home based or classroom based. Some course are fully online while others may only use email. One institution supplements its online course with radio.

Video conferencing is used, although audio conferencing is pretty well unused.

B.C. has a Provincial Learning Network which supplies the Internet connection to the institution's door. The province has a \$2,500,000 fund to support infrastructure upgrading.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

The provincial government co-ordinates TEL development. EMerge had been charged with this responsibility. Institutions still make their own decisions at the local level.

Currently the provincial Articulation process does not include online courses. There is an Articulation Committee associated with the Applied Business Technologies pilot project which is establishing credit transfer guidelines.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

C2T2 is the co-ordinating body for TEL infrastructure, equipment and software. There is an IT Mangers Committee which looks at systems level issues, information sharing and collaboration.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

Marketing tends to be the last thing addressed.

What are your overall plans for the future TEL developments? Realistic and optimistic.

It will become easier for students to access online education with less red tape and more options. There is a need to develop a collaborative environment. Students will leave if there is not a co-ordinated approach. There is tremendous competition and B.C. cannot assume it will keep its students.

To be successful there has to be faculty support and involvement. Senior level administrative support is not enough. Many faculty feel threatened by TEL. They have to be involved at the grassroots level and their concerns and fears have to directly addressed. There is a need for a lot of relationship building, problem solving and human relations.

Date: January 15, 2001
Name: Adrian Kershaw
Institution: University College of the Cariboo
Location: Kamloops, British Columbia
Contact Info. www.cariboo.bc.ca/
Background: University College of the Cariboo is a two-year degree granting institution. Its main campus is in Kamloops. It has a sub-campus in Williams Lake and five Training and Education Centres.

1. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Students contact the College directly. They have a travelling team which presents online/desk top orientations to prospective students. Because of the bandwidth demands the presentation can only be seen at locations with high-speed access.

Cariboo is developing a comprehensive Website. They are planning to have the entire admission process online in six to eight months.

Privacy has not been an issue. All important information is password protected.

Curriculum: How do you ensure academic excellence?

Cariboo has a few full programs for distance delivery and many courses. Only a fraction of these courses are online.

Online courses are developed in an ad hoc fashion. Instructors work with the IT Support Group. There is a course template which they use. Cariboo is constantly searching for course development dollars. There are some provincial and federal government sources but they are also looking to the private sector.

Have begun to work on collaborative approach to developing curricula. Online courses, if done well, are expensive. There is a need to work with sister institutions and distribute costs, and work load, over a number of partners. This has raised a host of issues (such as credit recognition, sequencing, fee structure) which they are currently working through.

Fortunately B.C. has a well developed Articulation Program. The Program assesses courses for transfer credit. Virtually all 1st and 2nd year courses are transferable across all public institutions. Because of the well developed Articulation Program it is relatively easy for students to transfer classes. The

only stipulation is that most institutions will stipulate that a certain percentage of course have to be from the home institution before it will grant a degree program

This program is not directed at online course. However because standards have been created it is relatively easy to build online courses which will be transferable for credit.

Support for Users – How do you maximise student success?

Most students access their own computer, which creates lots of problems. Instructors define technical requirements for their course. In most cases the requirements are quite low. The instructor doubles as the technical support person. However, most instructors do not have a strong technical background.

Cariboo is piloting a Distance Education Learning Study Centre which is now in its third year. The Centre provides a suite of services including academic advice, financial support, technical support, learning study skills, accessing library material and mentoring/tutoring. Students also use the centre to access technology and interact with fellow students. They are moving to putting a range of these services on line.

Kershaw believes there is a need for learner support. In his experience it is a myth that people are looking for distance education options. Most take it because they have to. Success, rates, without a strong support system, is relatively low (33%).

Training students in the technology is mostly unnecessary. Their primary platform is WebCT and most students learn it on their own. They can access support through the Instructor and the Learner Support Group.

The group which does require training is the faculty. Cariboo has allocated \$250,000 to train staff in IT. They are attempting to overcome the reluctance of instructors to engage in online teaching. Consequently they are providing a lot of training with the intent of encouraging the gradual introduction of online courses. The current focus is on onsite activities to support instruction (i.e. LCD panels, WebCT for course outlines, etc.). The plan is: a) get instructors to use online tools; b) encourage instructors to maximise their use of online tools; c) demonstrate that teaching success improves with IT.

None of the curriculum development and delivery costs are transferred to the student. The intent is to make online education easy and accessible and therefore reduce the demand on frontline staff. There are too few staff in the system. Technology will free up staff time.

Employment Services

They have no online employment services.

2. TEL Infrastructure and Support

Students are expected to use their own computer or a public access computer.

WebCT is the standard platform. Kershaw strongly recommends choosing a single platform and sticking with it. This allows people to develop course development expertise, is less confusing for students and keeps infrastructure costs down.

Online services comprise a small segment of their distance education program. A lot of course work is done through print based correspondence. They also have interactive video. They are scaling down their use of interactive video and replacing it with the cheaper online technology.

Cariboo can sustain only a few online programs. Kershaw wants to develop collaborative arrangements with other institutions. However, he is finding this is not a popular option for many instructors who want to develop programs independently.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

The biggest challenge is getting instructors involved. There are lots of students on campus; there is no incentive to go online.

Collaboration with other institutions is the way to go. Get committed people together from a number of institutions.

Students do not want individual classes and an ad hoc approach. They want full online programs.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Develop an in-house PC standard. Individual Departments should not set their own standards. This is what drives costs up.

Spend as much as possible on training instructors.

How are TEL technical support services planned, co-ordinated and funded? What works well? Why? What problems and issues have been identified?

Library support is the key issue. Cariboo is encountering access problems for online students due to copyright restrictions.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

Funding is the big issue.

Cariboo is also facing labour relations problems. Staff are concerned that technology will result in job loss. Kershaw people will only become redundant if they refuse to become technologically proficient.

What are your overall plans for the future TEL developments? Realistic and optimistic.

Cariboo is developing their strategic plan. Given the inherent conservatism within the University this will likely translate into a go slow approach.

Date: February 23, 2001
Name: Don Kinasewich
Title: Manager
Institution: Distance Education Learning Centre
Location: Hundred Mile House, British Columbia
Telephone: (250) 395-3115
Email: dkinasewich@cariboo.bc.ca

1. Describe the mandate, role and organisation of the centre.

The Distance Education Learning Centre originated as a pilot project of the University College of the Cariboo (UCC) and now has permanent funding. It is situated in the UCC's Hundred Mile House campus.

The mandate of the centre is to provide support to anybody in the community involved in distance education. Support could be anything but includes:

- Physical site which is a small classroom
- Three computers for online course work, typing papers and access to the Internet;
- Computer training which is provided one-to-one as required.

2. Specifically what services does the centre provide relative to:

Many distance students do not use the services provided by the centre. The centre has little contact with virtual students because they are mostly meeting their own needs.

• **pre-enrolment support:**

The centre provides academic counselling and preparation for distance education. It acts as an advocate helping students get through the post secondary bureaucracy. While students are responsible for organising their own program, staff are available if 'they hit a wall'.

• **study skills training:**

The centre provides a study skills workshop for two to three students at a time. It also provides informal essay writing skills support.

• **study support:**

A lot of support and encouragement is provided through telephone calls and other follow-up. The providing educational institute provides library resources. Students can access the UCC library if necessary.

- **technical training:**

For what they need there is not a steep technical learning curve and most training can be provided as needed.

- **What services/tools are required but currently unavailable?**

A lot of learners would benefit from face-to-face contact with instructors. Distance education courses have a wide range of tutor services – some are very good and some are not.

3. Who uses the services?

Three years ago 50% of students were newly minted high school graduates. Now about 75% have been out of high school for some years. Some students will enrol full time, others take one or two course at a time.

Characteristics	Youth	Adults	Older Workers	Seniors
	The centre has students from all their early twenties into their fifties. Students are fairly equally spaced across all ages.			
Human Rights information	Gender – about 60% female	Race – have not yet reached into First Nations' communities	Disability – One to Two percent are on WCB	
Academic	Ninety-five percent of students are in basic education programs.			
Access to computers	Not a big concern because most course are traditional course. In his experience about 25% of unemployed students have a computer at home.			
Ability to use computers	About 5% of students could effectively use a computer for course work.			

4. What is level of support is required by students (by characteristic)? Does the level of intensity change over time?

- **technical support:**

If there is adequate face-to-face support the technology is not a big concern. At a maximum they will need about one hour's training up front and then help as needed after that. The centre did an online WHMIS course and it took about 15

minutes to train the students, even though many were quite anxious about the technology.

Academic/study:

The centre only offers help in essay writing. The centre does have a high and ongoing need for academic support. Students feel isolated and get frustrated. They are often reluctant to phone the tutor. Maybe more responsibility should be placed on the providing educational institutions to provide academic support. However, there is typically not enough demand for any course to justify having an onsite instructor. Moreover, due to shift work and competing demands, students have a difficult time attending classes at a set time.

5. How are the centre's services and programs co-ordinated/shared between the home institution and the remote site?

The centre has a lot of autonomy from the UCC. The UCC's primary roles are as funder, as advocate for the centre, supplying technical support and supplier of the technology. The only glitch is library access. If students need a book the centre manager has to borrow it through his individual borrowing privileges.

It can be daunting for the students to deal with the providing institutions. Centre staff help students work out enrolment, costs, course offerings, prerequisites, etc.

There are times when the centre does not have the resources required by a particular course. In these situations the centre will try to acquire the appropriate resources. For example they are currently investigating acquiring CAD software and Photo Shop software.

Centre staff have found that many providing institutions do not have a distance education specialist. The registrar's office, for example, may not be aware of the procedures for enrolling at a distance. If the institution has a distance education specialist, other departments may not be aware of him/her. Generally speaking providing institutions have to do a better job of marketing their services, courses and programs.

About 80% of centre students want to enrol in a complete program. Most providing institutions provide only, or mainly, individual courses.

6. What is the centre's relationship with the K-12 system?

The centre acts as a referring agent. When adults come to the centre requiring secondary education they are referred to the high school. The local high school has better resources and a better computer lab than does the centre.

7. What are the other services provided at the centre? How do these services blend or co-ordinate with their educational services?

The centre provides no other services.

8. Other

There are no plans for the centre to become revenue generating. This would create another barrier to students.

Student financing can be a real barrier. Some students receive student loans. The centre is finding the student loan agency is becoming freer with the dollars to support distance education students. The other major source of student funding is Human Resources Development Canada (HRDC). HRDC has been very hesitant to endorse distance education. They want to know how the course will be monitored and if what guarantees there are that the student will complete the course.

Appendix C:

Alberta:

Athabasca University

Clive Keen

January 08, 2001

Date: January 8, 2001
Name: Clive Keen
Institution: Athabasca University
Location: Athabasca Alberta
Website: www.athabascau.ca
Background: Athabasca University a leader in distance-education. In 1999-2000 it served almost 20,000 students, with annual increase in enrolment of about 20% per year. Approximately 150,000 students have enrolled Athabasca's courses and programs since the Government of Alberta created the University in 1970.

3. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Counsellors and advisors are available for pre-enrolment consultation. There is a questionnaire on the Website for them to use to determine if they are good candidates for distance education. They have also prepared a number of online study packages with a variety of 'How to Study' topics

At the undergraduate level about 15% of students are trying distance education to see if suits their learning style. Keen calls them 'diagnostic' students. Another 15% are full time fully committed students. Most students (70%) are part time. They are taking a course or two for general interest or are slowly completing a degree started in the past.

Graduate students tend to be fully committed and enrolled full-time.

It is up to other institutions to determine if they will accept Athabasca course for credit. Keen is working with Campus West to try to establish a credit transfer system amongst participating campuses.

Athabasca will assess credits of Athabasca student for \$50 once they have taken two courses. If they do not take any courses the cost is \$250. This is because they have had problems with people asking for assessing their credits then not enrolling. They find this expensive and want to discourage the practice.

About 4% of students apply for financial support. They do not find it a big issue because the greatest portion of a student's expenses are living expenses which is not an issue at Athabasca.

There are two provincial issues: student privacy and protection of intellectual property. The university has done a lot of work developing firewalls etc, to control access to student information. Interestingly Keen says the drive for

privacy has been spearheaded by University administration; few concerns have come from students.

Intellectual property is an ongoing concern. Because online material is accessible over the web it is also accessible to piracy.

There are limited costs for pre-enrolment activities. Students requiring an assessment of previous credits will be charged \$50 or \$250 depending on circumstances (see above). Courses cost the same as other Alberta universities (about \$410, including texts)

Curriculum: How do you ensure academic excellence?

There are two modes of study at Athabasca University:

- Home study (self-paced). Students have access to counselling and have an assigned tutor which keeps in regular contact. They also have access to university services such as library, call centre and online information. Nonetheless home study is individually centred education. In home study there is a lower completion rate, about 60%;
- Paced students (classes with fixed start and completion dates). These students have the same resources as home study students as well as scheduled conference times with other students and the instructor. These gatherings will often take place at distance learning centres. There is also an online paced variant. In this variant students do not physically meet but they do have fixed start and finish dates and have access to a cohort of students in the same 'class'. Keen sees greater need for face to face paced study, especially for undergraduates who need the structure and physical contact of teachers and other students. Graduate students fare better in an online environment. Keen believes that because graduate students bring a lot of knowledge to the class and because they are highly motivated they all benefit from each other's insights and contributions in various online forums. Undergraduates on the other hand have less to contribute and therefore get less out of online forums.

People tend to think in terms of distance education as being a tool to reach rural and isolated learners. This is a misnomer. Instead of thinking it as distance education it should be thought of as distributive education. Under this model the technology is used to enhance education for all students. Distributive education can be a very valuable tool for urban students. It is also a valuable marketing tool to access students around the world. From a rural perspective the reality is:

- most people under twenty-five want to have a campus experience
- those over twenty-five they have limited need for education;
 - self-interest;
 - to complete studies initiated in the past

- it is difficult to recover development costs if courses are only marketed to rural clientele

Courses are delivered under a variety of technologies, especially at the undergraduate level. While all courses have an online component, this is sometimes only email. (Keen believes email is very important for keeping in contact with students). At the graduate level it is totally online.

Keen doesn't see online as fundamentally changing how courses are taught - after all the backbone of most course work is reading. The big change has been with more students expecting online and believing online to be the future.

Nonetheless online can really enhance courses – the MBA program for example is totally online

All courses are developed on site although they may contract out for content development. Each University Department determines which courses they provide and the mode in which they will be provided. Some instructors may be quite anti-online and develop little for the online environment. Others will be online protagonists. In many cases there will be a variety of delivery options from which the students can pick. Keen and his department may be consulted on the best mode for a course but it is the Department which ultimately decides. About 25% on undergraduate courses are fully online.

Keen wants all classes to become more online enhanced. However at this point in time cannot assume that students have access to the technology. Therefore online participation has to be optional. They are gradually evolving their system to the point where online is the central component.

Costs of course development are borne by individual Departments. They have to allocate their budget accordingly.

Any technology is simply a tool and it cannot be allowed to dominate the act of teaching. Online can be useful when you need student/teacher and/or student/student interaction and/or the course has a multimedia requirement. However the web is ways away in realising its power. On one hand there are the technical limitations of bandwidth and with the equipment used by students. Courses have to be designed assuming the students have relatively low level equipment. On the other hand there is much work to be done to understand how best to use the power of the Internet. Keen predicts that once the bandwidth issue is solved there will be a period where everybody will try to transpose live courses onto the internet, something which result in a lot of talking heads and little innovation. Any technique is simple that, a technique. Books and reading is still the backbone of post-secondary education. The Internet can be used when you need interactivity (email) or multimedia (video or audio).

Support for Users – How do you maximise student success?

Home Study students have access to counselling, library, tutors (which phone students regularly), a call centre and lots of online information. There is also an information centre, which while designed to support academic information needs. The information centre handles about 250,000 calls a year. Paced Students have all the resources supplied to home study students as well also regularly meeting with a tutor. Students meet in learning centres which are provided by partners (schools, businesses, libraries, etc.). Athabasca ensures that tutors are qualified and supplies them with necessary material. The tutors are responsible for invigilation. Online Paced students start and finish course at a fixed time. They will have online fellow students with whom they can access through email, bulletin boards, chat rooms, etc. Post graduate students tend to get more out of online paced than do under graduates.

Examinations are held at a partnering site and are invigilated by a local person. The partnering institution is provided an invigilation fee.

Post graduate courses are presented through Lotus Notes. Lotus Notes have a learning curve and there is a call centre students can use. The call centre is accessible through email and telephone.

Most under graduate courses are provided through the web, which is essentially point and click and requires minimal training. These students also have access to the technical call centre.

There is a staff person working with students with disabilities. The university pays for any software required by a student with a disability.

Athabasca does not take the position that distance education is a substitute for face to face education. There are two reasons for this: first a campus experience is essential and should be encouraged for students, particularly under graduates. Second distance education can be, and is used, to supplement face to face course. In Athabasca's experience most under graduate students use distance education as a supplement to on-campus work.

Employment Services

The Website has lots of links to online education

They are developing a system where students can register themselves and provide info about themselves (i.e. resume) to employers. This will be expensive and will be developed by a private firm.

4. TEL Infrastructure and Support

The university maintains low to medium low standards relative to students' computers. Courses are developed assuming a Pentium class computer, with 28800 fax modem and dial-up instead of high speed Internet hook-up

Athabasca uses a variety of platforms. WebCT is used most often. The MBA program uses Lotus Notes. Employing a variety of platforms can be an issue because students may have to learn a number of different platforms

There are a variety of modes used: online, video, Java, video stream, audio stream, etc. Keen is concerned that once the bandwidth issue is resolved there will be a mad rush to emulate a classroom setting on the web – which will mean a lot of talking heads. There will be a natural progression towards more thoughtful and useful use of the full potential of the web

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Athabasca used to have a central planning function but have moved to a more diverse model. Some instructors really get into online presentation, others do not.

Course development is costed as part of regular budget. Staff will use the time they feel necessary to develop the program. Have online design team which may be called on for help. They may also go to private expertise as required.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Athabasca experiments with a lot of options and opportunities. If the technology is too expensive it may not be available. Student familiarity with the technology is taken into consideration but it is fundamentally a department decision, not a central decision.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

Marketing is not a problem. Most students expect an online component. If anything there is too much demand for online products.

Most fresh high school graduates want the campus experience. The demand for distance education comes from older students. The future for distance education is 1) postgraduate studies; 2) older students who cannot get to, or do not want, a campus environment; 3) those who are finishing a degree/program started elsewhere. Unfortunately these students are a small percentage of the total student base and are therefore are a small revenue base. From an economic pint of view, the university cannot make a go of it if it market primarily to a rural base.

What are your overall plans for the future TEL developments? Realistic and optimistic.

All courses will be available in an online mode and eventually online will be the only mode. Students will also be able to access a lot of data which is customised to their needs and data which is personal to them.

There will be no difference between distance education and face-to-face. There will only be students who will take more or less of their courses face-to-face. Urban universities who are serving their normal students will lead the online revolution. What they learn there will be used for distance education.

In the next five years money will be wasted trying to replicate face-to-face courses online. Asynchronous is the way of the future

Appendix D:

Manitoba:

1. University of Lori Wallace February 2, 2001
Manitoba
2. Campus David February 28, 2001
Manitoba Rehaluk

Date: February 2, 2001
Name: Lori Wallace
Institution: University of Manitoba
Location: Winnipeg, Manitoba
Website:
Background The University of Manitoba is a member of Campus Manitoba. Campus Manitoba is a consortium of the three provincial universities and all colleges. All courses are provided at a distance. Member universities provide course content and delivery education. Courses offered through Campus Manitoba have been articulated. This allows for the seamless transfer of credits within the consortium. The provincial government provides its operating budget and course development costs. No administrative fees are charged to the student and all tuition fees are transferred back to the university providing the course.

5. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

There is no formal pre-enrolment assessment process. The Website has a learning skills section prospective students can refer to in addition to printed material. There are also two student advisors who they can talk with. It is the responsibility of students to be prepared.

The University of Manitoba (UofM) follows all provincially mandated privacy legislation. All student information is password protected.

Curriculum: How do you ensure academic excellence?

All course development is driven by instructional design. The UofM offers three full programs at a distance: a Bachelor of Arts (with six majors and 10 minors), a Bachelor of Social Work, and a Post RN Bachelor of Nursing.

To date the response to online course offering has been disappointing. This is more true for under graduates than for students in graduate studies and professional schools. Most undergraduate students chose print based options (about 10 print-based students for every online student). This may be because many students do not have access to a computer. UofM has responded by not developing many fully online courses. Most courses are print based, supplemented with email.

They work with academic units to determine which course to develop. They also look at enrolment levels in on-campus course as an indicator of general need.

The typical distance education student has changed over time. In the past they tended to be rural adults. Now they are more likely to be urban youth who are also taking on-campus courses. About 50% of UofM's distance education students live in Winnipeg. The major motivations for taking an off-campus course are: a) cannot fit on-campus course into schedule; b) work conflicts; c) better suited to student's learning style.

Courses are developed by an instructional designer working with the content specialist. A six-hour credit course will cost between \$25,000 to \$30,000 to develop. There are also annual course revision costs. The UofM has developed over 25,000 course hours spread over 100 plus courses. Courses pay for themselves (course development, revisions and delivery) if they are well attended. Generally speaking popular courses 'help' pay for less popular course.

Support for Users – How do you maximise student success?

UofM has a distance education library service and employs a reference librarian. Students also have access to technical support through print instructions, the Website and a technical help desk.

All UofM students have an account on the UofM server which gives them access to email, search capabilities and online document delivery (they have a copyright agreement which allows distance education students access essential material).

The UofM's Student Services Unit is a problem solving unit. They provide a human voice. One of their functions is to track assignments and help ensure students get timely feedback.

TEL is well suited for students with diverse needs. There are many options for delivering information. They also ensure that their HTML material conforms to disability accessibility guidelines.

The Distance Education Department has an annual budget of about \$2,600,000. This budget covers curriculum development, student support services and administration costs. All Department costs are recovered through tuition fees. Staffing of the program includes:

- 1.5 library;
- 3 student services;
- 1 student advisor;
- 1 programmer;
- 1 desktop publisher;
- 1 editor;
- 3 instructional designers;
- 1 financial advisor;
- 2 administrative assistants.

- *Employment Services*

There are no special employment services for distance education students.

2. *TEL Infrastructure and Support*

Students supply their own computer. They try to keep undergraduate courses to minimum technical standard.

The Distance Education Department has moved to WebCT for its delivery platform. They had developed their own software and moved to WebCT because UofM moved to it and it is now the institution's standard platform.

Campus Manitoba uses LearnLink as its delivery platform. The UofM has some problems with LearnLink especially in relation to firewalls. LearnLink is a fairly high end application and there are a lot of technical glitches. Nonetheless it is an excellent product for specific courses which require a lot of interactivity.

The Distance Education Department does not pay direct platform costs. Technical support costs between \$60,000 and \$100,000 per year.

3. *Planning and Co-ordination*

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Academic units initiate TEL planning, although Distance Education can also generate suggestions for course development.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

There is still an institutional prejudice against online courses. There are concerns about quality. Consequently Distance Education has to be very careful to ensure all online course maintain equivalency standards.

There are also issues regarding convergence of distance and on-campus courses. Academic units need an incentive to supply distance education courses. Academic units do not want online course development to be a cost to the department and they do not want to see department resources diverted to distance education.

What are your overall plans for the future TEL developments? Realistic and optimistic.

Wallace wants to move, as soon as students are ready, to more comprehensive online course development. There will be cost savings (i.e. staff time, postage, material costs, etc.) to moving to online. They can then reinvest savings in student services. There will also be quicker access to material and information and the general quality of the experience will improve.

Convergence and flexibility are important directions for post secondary education. Online advocates have to be patient because they are dealing with established institutions and universities who, by their nature, are slow moving.

Date: February 28, 2001
Name: David Rehaluk
Title: Co-ordinator
Institution: Campus Manitoba Centre
Location: Dauphin, Manitoba
Telephone: (204) 638-4647
Email: davecmb@hotmail.com

9. Describe the mandate, role and organisation of the centre.

The mandate of the centre is to offer a selection of university courses in Arts & Sciences, Business Administration and Psychiatric Nursing to communities in west central Manitoba as well as White Bear Saskatchewan. Courses offered at the centre are provided by Brandon University, the University of Manitoba, the University of Winnipeg and Athabasca University.

The role of Campus Manitoba centres are to act as satellite campuses and resources centres for students who cannot relocate to Brandon or Winnipeg

Most centres are located in the local high school. The centres have a classroom equipped with a computer attached to a 32" monitor and microphones at each desk. The co-ordinator's office has one or two additional computers for student use and a small resource centre (calendars, books, video and audio tapes). Science courses are taught in the high school labs but use Campus Manitoba equipment and materials.

Most Campus Manitoba courses are designed to be delivered in a classroom, real time environment. Brandon University and the University of Winnipeg are developing more online, asynchronous courses. Students who are taking asynchronous courses may have no relationship with Campus Manitoba. These students relationship is usually with the providing university.

The centre is staffed by a co-ordinator and assistant co-ordinator. They also have laboratory instructors (often high school teachers) who oversee science courses.

10. Specifically what services does the centre provide relative to:

- **pre-enrolment support:**

Prospective students meet one-to-one with the co-ordinator. During these meetings prospective students may do interest and abilities testing and/or investigate program interests and availability. The co-ordinator will receive and co-ordinate the application and registration process. Students register with each university they are taking a course from.

The co-ordinator also attends and organises a variety of group events for students and communities to promote Campus Manitoba.

- **study skills training:**

The Campus Manitoba Website has a number of sections which help develop study and learning skills, academic writing skills, academic research skills and time management. They used to provide study skill classes but they were poorly attended and have been dropped.

- **study support:**

The co-ordinator provides one-to-one counselling as required/requested. He also has books and other resources students can use. Academic support is available through the providing university. Local support is provided in an ad hoc manner. If the co-ordinator or assistant co-ordinator can help they will. There are local tutors who provide private, fee for service, tutoring

- **technical training:**

An orientation session is held before each course. They are introduced to the technology and how it works. This would include using the microphones, Learn Link software, the internet and email.

- **technical support:**

The co-ordinator is responsible for general technological support. Campus Manitoba has a Technical Co-ordinator at Brandon University who provides technical support at a distance.

- **Are the services (or tools) freely available, available as “open source” or shareware, for purchase, through broker arrangements?**

All services are provided as part of the course tuition. Students hiring private tutors do so at their own cost.

11. Who uses the services (demographic)

Three years ago 50% of students were newly minted high school graduates. Now about 75% have been out of high school for some years. Some students will enroll full time, others will be take one or two courses at a time.

Characteristics	Youth	Adults	Older Workers	Seniors
	The centre has students from all age groups, although only a few are seniors.			
Human Rights information	Gender – about 75% female	Race – about 20% aboriginal	Disability – very few	
Academic	Offers only university level classes. Most students are in under graduate programs.			
Access to computers	For direct course work students do not need a computer - all necessary technology is provided at the centre. Students do need computers for typing papers, emailing instructors and doing research. Most students have computers at home. Students close to the centre can use a centre computer. Students who live a distance from the centre are more disadvantaged.			
Ability to use computers	Younger students are usually computer literate. Some older students have a hard time getting comfortable with computers.			

12. What is level of support is required by students (by characteristic)? Does the level of intensity change over time?

- **technical support;**
- **academic support**
- **study support**

Older students typically need extra support in all three areas (technical support; academic support and study support). The longer they are in the program the easier it becomes. The first year is more intense than subsequent years.

13. How are the centre's services and programs co-ordinated/shared between the home institution and the remote site?

Campus Manitoba, run out of the Education Technical Unit at Brandon University, is the co-ordinating body between the providing universities and the centres. Registrations and applications are in paper form. Students work with the centre co-ordinator to complete registrations and applications which go to Brandon University for processing and eventual forwarding to the appropriate providing university. Students will be registered with each university from which they receive courses.

Courses co-ordinated through Campus Manitoba have been deemed as equivalent by all three Manitoba universities. This relieves any concerns about transferring credits.

Brandon University provides online library services.

Exams are written at the centre and shipped to providing university for marking.

14. What is the centre's relationship with the K-12 system?

The centres are located in local high schools. Centre staff have regular contact with high school principals and counsellors. The centre has access to the high school's computer labs.

They have little contact with the K-9 system.

15. What are the other services provided at the centre? How do these services blend or co-ordinate with their educational services?

The centres' sole role is the provision of university courses through Campus Manitoba.

16. Other

The technology can be frustrating. Most problems do not originate in the centre but somewhere 'down the line'. The centre has just received high-speed access and they hope this will improve the service.

The provision of courses through the Internet is much cheaper than via satellite (which was the previous method of delivery). Satellite service costs about \$1000/hr. Internet delivery costs about \$15/hr.

Appendix E:

Ontario:

- | | | |
|--|----------------|----------------------|
| 1. Contact North | Debby Sefton | January 8,
2001 |
| 2. Lakehead
University | Gwen Wojda | January 25,
2001 |
| 3. North West
Video
Conferencing
Consortium | Dell Schmucker | February 23,
2001 |

Date: January 08, 2001
Name: Debby Sefton
Institution: Contact North
Location: Thunder Bay, Ontario
Website: www.cnorth.edu.on.ca
Background: Contact North works with a number of education institutions providing services to Northern Ontario. This includes thirteen post secondary institutions and seventeen school boards.

6. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Contact North does not provide pre-enrolment services. Each institution offers their own pre-enrolment services.

Curriculum: How do you ensure academic excellence?

Each institution develops its own curriculum. There was at one time a provincially sponsored curriculum development fund. This fund has been depleted and no new money is forthcoming.

Support for Users – How do you maximise student success?

There are 145 public access centres across Northern Ontario. These centres are located in learning centres, post secondary institutions, high schools, elementary schools, etc. They are open to the public and are often used by distance education students.

The centres do not all have the same level of service. All have audio conferencing capability, 24 have video conferencing capability and 41 have Internet access. Although not all Internet sites are open to the public.

Contact North does not offer many online courses. Students can use the Internet for research.

There has been little need for accommodation for students with diverse needs.

The services of Contact North are at no cost to the student. Contact North covers network and telephone costs. The community contributes by supplying the learning centre and equipment.

Employment Services

Contact North does not supply any employment services.

2. TEL Infrastructure and Support

Contact North is not involved with online courses and has no infrastructure for technology enhanced learning.

3. Planning and Co-ordination

What are your overall plans for the future TEL developments? Realistic and optimistic.

Audio/visual technology will always be important.

The Internet will become important. At the moment there is still not a lot of access to the Internet in the North. Many communities do not have an Internet provider. Often it is even difficult or impossible to establish audio feeds. For example, while most communities have telephone connection, some are on party lines and some use radiophones.

The Internet would be useful. Interactivity is very important. Courses should be developed that are partially synchronous and partially asynchronous. However the development of online education does not lessen the need for:

- student/instructor interaction;
- student/student interaction;
- student support in the community;
- affordable access;
- courses should be developed using a number of formats;
- courses should be developed based on the best delivery mechanism.

Date: January 25, 2001
Name: Gwen Wojda
Title: Director, Part Time Studies/Distance Education
Institution: Lakehead University
Location: Thunder Bay, Ontario
Website: www.lakeheadu.ca
Background: Lakehead University is associated with two distance education consortia. Contact North which essentially provides non- on line distance education and the North West Video Conferencing Consortium which focuses on web based distance education.

1. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

On the Lakehead web site there is information on distance education courses. There is also a sample on-line course which prospective students are encouraged to review.

Lakehead University is involved in some credit brokering. They have in the past leased some courses from other institutions. They are also involved in leasing their courses to other institutions. Depending on the course they charge anything from \$5.00 per student per course to \$25.00 per student per course.

Curriculum: How do you ensure academic excellence?

Lakehead has access to fifteen high-speed access sites. These sites could be in Board offices, classrooms or small learning centres. They have a \$12,000 PC based unit that can travel from site to site. With this unit they have access to high speed Internet connections, audio-visual display and LCD panel. Students will assemble at any of the 15 sites with the instructor in one. During the class there is full interconnectivity among all sites. Because the unit is portable, the instructor can, over the duration of the course, make personal visits to many, if not all, of the sites.

Lakehead has eight distance education programs ranging from undergraduate degrees to masters to PhD. They also have credit and non-credit certificate programs delivered at a distance.

Courses are selected for development in conjunction with instructors. The development team is comprised of the content specialist, the instructional designer and the technical support person. The university and the content developer jointly own the course. Courses are identified from a program perspective relative to which program can be delivered at a distance. Curriculum

development is based on a module approach which gives instructors the leeway to modify course delivery. Courses are designed such that tuition revenues cover development costs.

Course development costs range from \$15,000 to \$75,000. Course development costs include \$8,000 each to the content developer and instructional designer.

Support for Users – How do you maximise student success?

Students have access to a tutor, a technical support person, academic counsellor and personal councillor. The University also has a librarian assigned to support distance education.

Learners can find an outline the online courses on the university's web site. Online courses include a short video clip from the instructor. Students are also invited to provide a profile to the instructors. This is done to help promote a personal connection between the student and instructor.

Students can access computers at any of the 15 Lakehead sites. Arrangements can also be made for access to computers at schools, public access sites etc. While the courses are designed for high-speed connection students can dial up from home. However, this will affect speed.

Lakehead has a Learning Assistance Centre which identifies and resolves accommodation needs for persons with disabilities.

- *Employment Services*

Lakehead University has no employment services for its distance education students.

2. TEL Infrastructure and Support

The standard platform for on line delivery is WebCT. Much of the course delivery is asynchronous, augmented with audio conferencing. Media Network is used in the Learning Centres, allowing for full interactivity including audio and video.

3. Planning and Co-ordination

What are your overall plans for the future TEL developments? Realistic and optimistic.

Lakehead believes in the multi-mode and multi site philosophy. They believe in using the mode that works best for the subject and the student. They used to offer many face-to-face off-campus courses but have reduced them in recent years. Now instructors travel to a different site each week and link to each site

through high-speed connections. Students receive a combination of face-to-face and video conferencing.

Date: February 23, 2001
Name: Dell Schmucker
Title: Information Systems Manger
North West Video Conferencing Consortium
Institution: Keywatin-Patricia District School Board
Location: Dryden, Ontario
Telephone: (807) 223-1254
Email: dell.scmucker@ kpdsb.on.ca
Website: www.kpdsb.on.ca

17. Describe the mandate, role and organisation of the centre.

The North West Video Conferencing Consortium is comprised of four school boards: the Keywatin-Patricia District School Board; the Superior Greenstone District School Board; the Superior North Catholic District School Board; and the Northwest Catholic District School Board. The consortium operates 15 high speed internet sites in high schools stretching from the Manitoba border to the eastern end of Lake Superior. Only Thunder Bay area is not participating in the consortium.

The consortium collaborates with Lakehead University in the provision of distance education courses. They are also cost sharing the cost of increasing

the bandwidth at the sites.

18. Specifically what services does the centre provide relative to:

- **pre-enrolment support:**

Lakehead University will canvas the area to determine the demand for various courses. If there is local demand the university will contact the high-speed site to reserve the time, equipment and space to conduct the course.

Lakehead is responsible for all pre-enrolment support.

- **study skills training:**

Lakehead is responsible for all study skills training.

- **study support:**

Lakehead is responsible for all study support.

- **technical training:**

Site staff make sure all students are familiar with video conferencing technology. They also help them develop sufficient keyboarding skills.

19. Who uses the services?

The Consortium keeps no statistics on adult learners. Generally speaking there are relatively few adult learners accessing the sites. Most adult distance education is provided using traditional technologies and is delivered through Contact North.

- **Ability to use computers**

The level of proficiency is increasing all the time. People who are intimidated by the technology get comfortable with it very quickly.

4. What is level of support is required by students? Does the level of intensity change over time?

- **technical support:**

The sites provide staff for the first five or six classes in a course. The first two classes require a lot of 'hand holding'. There is a learning curve and comfort level that has to be achieved. Students usually achieve that comfort level quite quickly. After the first few classes a technician monitors the site, sometimes onsite, sometimes at a distance.

- **Academic/study support:**

Lakehead is responsible for all academic/study support.

5. How are the centre's services and programs co-ordinated/shared between the home institution and the remote site?

Lakehead University has the closest relationship with the consortium. The university works closely with the consortium and have cost shared the purchase of equipment and infrastructure.

Fees charged to Lakehead for using the sites are still being worked out. Site fees would be in the range of \$100 per hour.

Lakehead is responsible for academic and support services for students enrolled in their courses.

6. What is the centre's relationship with the K-12 system?

The consortium is owned by four district school boards. The high-speed sites are mandated to meet the needs of those districts. The sites are primarily used for administrative purposes to allow for virtual meetings. Most schools offer a number of online courses and the sites are used to deliver those courses.

7. What are the other services provided at the centre? How do these services blend or co-ordinate with their educational services?

The sites exist to support the needs of the participating school districts. They provide access to adult learners and post secondary institutions as a complement to their primary role.

8. Other

The sites are all networked together by a consortium owned IP bridge, which eliminates any transmission charges. The interconnectivity within and between sites is very strong. People, can share and collaborate on documents between sites. Site administrators can monitor the activity on all computers in all sites. Consequently the sites are great training facilities.

Appendix F:

New Brunswick:

1. TeleEducation NB Rory McGreal January 15, 2001
2. Connect NB David Roberts February 15,
2001

Date: January 15, 2001
Name: Rory McGreal
Institution: TeleEducation NB
Location: New Brunswick
Website: nova.teleeducation.nb.ca
Background: TeleEducation New Brunswick provides assistance in the development and delivery of distance education programmes. Access to distance learning is made possible within New Brunswick via a Shared Network of distance learning centres and globally via TeleCampus, a comprehensive directory of online courses.

7. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

TeleEducation NB provides online study skills modules. The idea is to develop online high school classes. In the future he foresees a time everyone will have experienced online learning before they leave high school. There are currently twelve high school course available online.

TeleEducation NB is involved in Prior Learning Assessment Recognition (PLAR). TeleEducation NB assesses credits and supports associate degrees through the universities and community colleges. They are looking at a central registration/crediting agency.

It costs the individual about \$200 to be involved in PLAR. Any credit assessment is also paid by the student. Currently there is no similar system at the university level.

Normal precautions are made to protect the privacy of students. They have virus protection and firewalls, however, in some circumstances, they have had to work outside of the firewall due to technical difficulties.

Curriculum: How do you ensure academic excellence?

TeleEducation NB does not deliver any courses. Courses are developed by the post-secondary institutions. New Brunswick has developed more online courses per capita than any place in the world. For example, most first year courses at the University of New Brunswick are online as are some postgraduate programs.

They are taking a business approach to developing and marketing online courses. TeleEducation NB has strong relationships with private sector and works with them to provide private sector training needs.

TeleEducation NB is moving to a single all Internet environment to serve both on-campus and off-campus education. As bandwidth increases more and more educational services will move to the web.

There is a need to develop standards for learning objectives. This will allow for easier credit transfer protocols and credit brokering. With standardised learning objectives many schools can use the same course. Moreover the Internet will open up dialogue and discourse. Students will be able to study in both a mass and individual environments.

Each university is responsible for developing courses. Each university has a multimedia centre to support course development. Most instructors do not have the background to develop online courses. Good course development requires an instructional designer, a content specialist and a technical specialist.

N.B. universities have considered purchasing/leasing online courses but are very reluctant to do so. Conversely, N.B. has had very little success selling/leasing course they have developed.

There will come a time when the web will be saturated with courses and there will be a need for consolidation. There will be less room for institutions to develop their own courses.

The provincial government has a program development fund for courses developed for export. Up to \$100,000 per course can be accessed through this fund. Industry Canada also provides up to \$10,00 for course development.

Support for Users – How do you maximise student success?

The University of New Brunswick's library is online and most of the catalogue is digitalized. There is a mentoring program for high school students. At the post secondary level the instructor supplies academic support online.

There are over 200 Community Access Program (CAP) sites across the province. Because they are locally managed student access varies by location. Typically students would have priority over other users. Nonetheless McGreal finds that most students access their computers.

Students need to be trained to use the technology but training can be built into the course.

TeleEducation NB has a centre and a help desk for technical and general support. Academic support is supplied through the schools which have mentors or instructors available online and/or over the phone.

McGreal would like to standardise the technical, guidance and academic support systems to be accessible to both on-campus and off-campus students.

The student support systems should be as personal as possible. A physically available mentor is better than accessing support over the phone which, in turn, is better than accessing support over the Internet.

Employment Services

TeleEducation NB works closely with community colleges and have achieved about an 80% placement rate. They also work with private industry to ensure course meet industry needs and the number of seats available reflects employment opportunities. In emerging industries, such as IT, there is usually *little labour market knowledge. In these cases they tend to be more proactive.*

2. TEL Infrastructure and Support

Computer standards are minimal.

They are investigating a common platform but are not too concerned if a common standard cannot be agreed to. Platforms are relatively easy to learn.

They are investigating using Bobbi to analyse if online information is accessible to people with disabilities. However, converting to Bobbi will be expensive.

About 99% of courses co-ordinated through TeleEducation NB are available online. They provide some audio enhanced course and even fewer are video enhanced. The province's initiative is to co-ordinate the province's online learning, commerce and government functions.

Technical support is important, including after-hours help. They would like to develop a provincial wide centrally co-ordinated help desk. McGreal would also, like to see an Online Learning Community which would include secondary and post secondary schools and community organisations.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

The big issue is leadership. Online education will make for significant changes in how education is delivered. To create the atmosphere for change you have to destabilise the system. Support for change has to come right from the top, within institutions and within government.

The education system has to get back to the basics and use technology to deliver the education. Current thinking is that distance education is an add-on. As long as distance education does not challenge the status quo than it will not be accepted. The challenge is to integrate the technology into the entire system. This will lead to the greater cost effectiveness, although it will also require significant up front costs.

Change will happen more quickly if it is an open system. Allow for many options, let them grow and see who flourishes. Find mechanisms for letting older delivery systems to die as they fail to adapt. The private sector is the key.

McGreal's PhD dissertation entitled: "TeleEducation NB: A systems analysis of a province-wide distributed distance learning network " includes recommendations for promoting distributive education. It is available in Word 97 format in a 1Mb zip file and is available at teleeducation.nb.ca/staff/rory/

What are your overall plans for the future TEL developments? Realistic and optimistic.

There is a growing trend to free, universal education. The growth of the web will spearhead this. As new information supersedes the old education becomes essential. This demand will lead to greater competition to supply information and lower costs.

There will be growing shift to outcome evaluation measures for education products.

Systems will need to develop standards which will allow for more interchangeability.

Copyright is dead. It cannot keep up with the technology.

Technological convergence will have a major impact in how education is delivered. (i.e. cell phones with keyboard and internet connection, electronic books).

Date: February 15, 2001
Name: David Roberts
Title: Executive Director
Institution: Connect NB
Location: Fredericton, New Brunswick
Telephone: (506) 444-4703
Email: droberts@nbnet.nb.ca

1. Describe the mandate, role and organisation of the centre.

Connect NB was created to ensure rural people were not technologically marginalised. Its mandate is to build and sustain 230 public access community centres in New Brunswick. It is estimated that, out of New Brunswick's 750,000 people, 300,000 have participated in some way or form in a Connect NB centre.

Each centre is community owned and a local board of directors governs each centre. Connect NB helps them find staff, courses, technology and technical support. Eighty percent of the centres are located in local elementary or high schools. They are open to the public a minimum of 25 hours a week during weekends and evenings. A typical centre will have six to eight computers, internet access, printers, scanner and a digital camera.

It is planned that the centres will become self-sufficient. Each received an initial start up grant of \$20,000. It costs about \$10,000 to \$16,000 a year to operate a centre. Currently centres generate, on average, \$12,000 a year. At the top end some centres generate \$50,000 - \$60,000 a year. Revenues are generated in a variety of ways:

- Memberships – most centres charge a membership fee. A typical annual family membership would be about \$20;
- Course fees – centres may charge a fee for providing courses. For example they offer a fully online GED program. The tuition for taking the course is \$500. Out of the \$500 the centre collects a \$250 centre fee, \$200 goes to the local electronic mentor and \$50 goes back to the course provider;
- Contracts to provide government services – many centres contract with the provincial government to supply online government services. For example, some centres are contracted to issue online driver's licences;
- Services – centres are encouraged to develop local revenue streams. Consequently there is a strong entrepreneurial component in most centres. Centres develop and sell services to the community. Example services include hosting websites, photo retouching and digital photography (i.e. producing digital wedding albums).

2. Specifically what services does the centre provide relative to:

- **pre-enrolment support and study skills training:**

Connect NB provides the centres access to a database of 300 technical online courses. The centres, however, provide few direct pre-enrolment and study skills services. Students would be directed to appropriate resources (i.e. educational institutes, websites, books, etc.).

- **study support:**

They are piloting a virtual mentor concept. It is one of the ways they are trying to embrace the student in an inviting culture of technology. It is hoped it will help the student feel connected to the educational experience. In fact some students find it more personal, flexible and immediate than face-to-face contact. The virtual mentor (typically a retired high school teacher) is electronically connected to the student.

Students also have access to any study support services provided by the course deliverer.

- **technical training:**

They offer a web-based course on how to use the Internet.

- **technical support:**

Centre staff will help students navigate through their way through their courses. The primary focus is helping students at the centre but many will also provide technical support to students in their own home.

3. Who uses the services?

Probably 75% of centre users have below average incomes. They come to the centre to gain access to the technology.

Age distribution	Youth	Adults	Older Workers	Seniors
	35%	30%	15%	20% - this group is rapidly increasing
Human Rights information	Gender – about 60% female	Race – no usage information	Disability – 95% of centres are accessible. No usage information	

Academic	40% - general interest 20% - adult basic education 40% - post secondary skills training (typically work related)
-----------------	--

4. What is level of support is required by students? Does the level of intensity change over time?

- **technical support;**
- **academic support**
- **study support**

Support is typically face-to-face at first. Students will arrange a schedule to access the technology. The virtual mentor monitors their progress and contacts them regularly. Contact and support falls off as students become more comfortable with the technology.

5. How are the centre’s services and programs co-ordinated/shared between the home institution and the remote site?

Connect NB is the centralised resource broker for the community access centres. Connect NB acts as referral and support service to the centres. For example it will identify for the local centres such things as course opportunities, technical resources, staff training opportunities, etc.

Connect NB also monitors centre usage and maintains usage databases. For example, it keeps statistics on student and course use at the centres.

6. What is the centre’s relationship with the K-12 system?

The centres are used by the K-12 system during the day and the public in the evenings and on weekends. Schools typically do not share centre costs, although they may purchase specialised technology they require.

It has taken a long time to build a relationship with the schools. There was a fear at the beginning that having the schools open after hours would be a security risk. On the contrary, they have found that having people in the schools has decreased the instances of vandalism.

7. What are the other services provided at the centre? How do these services blend or co-ordinate with their educational services?

The centres are the primary community focus for providing people with access to the technology. People can access the centre for any need. Because centres are community owned and have a local membership base they are user focused. Community ownership, coupled with the centres’ entrepreneurial orientation, promotes the provision of flexible and innovative programming and services.

Appendix G:

Newfoundland:

1. Open Learning and Information Network Genevieve Gallant January 10, 2001
2. Memorial University Glen Penny January 18, 2001

Date: January 10, 2001
Name: Genevieve Gallant
Institution: Open Learning and Information Network
Location: Saint John's Newfoundland
Website: www.olin.nf.ca
Background: Open Learning and Information Network (OLIN) is a Newfoundland and Labrador network of content and service providers delivering learning opportunities through technology. Its primary focus is to provide greater access to learning opportunities through collaborations and partnerships. OLIN receives funding from the provincial government and parcels it out to partnering institutions.

8. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

There are no formal pre-enrolment assessment processes. Student enrolment is the same as for on-campus students. They receive a package of information regarding the technical requirements and information on study skills and what to expect in an online environment.

They used to offer an orientation course through audio/video conference. Students would come to a central site where computers were set up. They have found, however, that recent students were already computer literate and have discontinued the course. OLIN also had developed a video on how to use computers which is also now considered redundant.

All important information is password protected. No significant concerns have been identified.

All costs are factored into over budget. No costs are passed on to students.

Curriculum: How do you ensure academic excellence?

OLIN has not developed many full programs. They do have a Bachelors of Technology program completely online. Most programs, however, have online components.

Support for Users – How do you maximise student success?

There are some online library resources. Students have no access to online mentoring or tutoring.

Memorial University has a Technical Administrator who provides online technical support seven days a week

Employment Services

They have no online employment services.

2. TEL Infrastructure and Support

OLIN relies on public access site for student access to computers. Students establish a schedule for accessing computers. Each site is independently administered and consequently has its own policies. OLIN has trained the staff in public access sites in the needs of distance education students.

Most courses require minimal computer standards. The focus is on the content not the technology.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

OLIN is the central planning agency for the province.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

They are having some difficulties putting partnerships together and getting institutions to see the big picture. OLIN is bringing computers into the K-12 system. They believe, as students become more computer literate they will generate a demand for online courses at the post-secondary level.

What are your overall plans for the future TEL developments? Realistic and optimistic.

The Internet is making the world smaller. People should be able to manufacture a degree using courses from universities all over the world. This raises the issue of credit transfer.

One concern is letting technology push the agenda. There is a need for solid planning and a strong vision. Traditional distance education has a lot to teach about how to provide online education. Training is very important. Staff have to be trained in IT, curriculum development, etc.

Date: January 18, 2001
Name: Glen Penny
Institution: Memorial University
Location: Saint John's Newfoundland
Website: www.mun.ca
Background The School of Continuing Education provides distance education services for Memorial University. The School offers: credit-free personal and professional development courses; University level course and programs; customised workforce training services.

1. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Prospective students are provided information to help them prepare for being an online student. They also provide audio conferences and tutorials during the first week of classes.

There is only informal pre-enrolment support. This can be a problem. A recent study has found that students want more pre-enrolment counselling and many are not prepared for the post secondary experience.

Distance students access financial aid the same way as all other students. Memorial has booklets, brochures and tapes to aid a student's academic preparation. They are developing an online course.

Privacy and confidentiality is an issue. They have password protection to access student information. The university is examining employing portal technology to serve as a gateway for student access to university information and services.

In addition to regular tuition fees students also pay a \$12 per credit (\$36 per typical course) administration fee to offset the cost of course materials. (i.e. shipping, CD's, course proctoring, etc.).

Curriculum: How do you ensure academic excellence?

Online course develop is a growing field. They have about 120 online courses developed and expect to have between 250 and 300 in the next few years. Few courses are fully online. They have found that students prefer to have courses delivered using a mix of technologies: i.e. print, video, Internet, etc.

Most students receive a combination of on-campus and off-campus education. In fact the typical distance education student is an urban dweller.

Memorial has student accessible computer stations in St. John's and Cornerbrook. They used to have distance education sites throughout the province. They are discussing re-establishing them.

Most curriculum development is done in-house. They will, on occasion, lease courses. For example they have leased the nursing program from Grant MacEwan College. They also do some leasing of courses to other institutions. They have not put a lot of emphasis on leasing/brokering courses. Nonetheless there has been a growth in the number of institutions coming to Memorial to lease courses. Memorial has a standard leasing fee of \$200 per year plus \$45 for each student enrolled.

Memorial offers a wide spectrum of online courses ranging from natural sciences arts, nursing, education, engineering, library sciences and mathematics. They currently have some fully online certificate programs and are developing fully online degree programs.

Individual instructors and departments identify courses for online development. They make a formal request to Continuing Education along with a guarantee the course will be offered over a number of years. A structural designer meets with the content provider. They work out the course objectives, pedagogy, audience, etc. They also identify what other skills are required to develop the course: i.e., IT specialist. Once a general plan is developed they decide on what will be the appropriate technology. It usually take between six and nine months to develop a course. Copyright clearance can take along time. Typically develop course costs are between \$30,00 and \$40,000. There is no cost recovery built into the budget. Continuing Care is given an operating to develop course. Revenues from those courses go directly to general revenues.

Support for Users – How do you maximise student success?

The typical student is home based though there are times when they meet in small groups. This is typically in a work based setting.

Students have access to an online library (along with telephone access), online research tools, technical help desk (online and telephone) and Continuing Education staff. While the Website has a lot of information it is still clunky. Penny would like to expand and improve their Website.

Invigilation is conducted through 200 centres (typically other schools) with which Memorial has arrangements. Invigilation fees are paid for out of the administration fee.

There is a unit on campus which works with students with diverse needs. Distance education can be an issue for a student with diverse needs. It is hard to meet all accommodation needs.

Employment Services

There are no specific employment services for distance education students. They do have an online job board.

2. TEL Infrastructure and Support

Technology standards for students are kept low. All students are supplied with these standards.

They have no standard platform. Memorial has developed its own template. They will use other platforms but they try to keep it low end.

Memorial has a long history of distance education. Their historical strength has been audio conferencing but the Internet is taking over. The online environment achieves the same goals but is easier. They have no particular need for real-time audio and video. They have the technology but seldom use it. They also have access to satellite services but make limited use of it as well.

Technical support is maintained by an IT specialist. They also have a group of instructional developers and two people who staff the help desk.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Continuing Education would like to expand its Website and investigate the use of portals. They do not know how far they will be able to with this.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

All funds come from the operating budget, although they sometimes get outside funding for special projects. Costs are multidimensional. There is an online component, video component, travelling camera crew, graphics crew and others. Altogether they have about 50 staff.

Systems are constantly being evaluated and scheduled for upgrading. Ballpark figure to keep the system up and running is between \$20,00 and \$30,00 per year for distance education services only..

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

Continuing Education is seen as a service to other departments. Consequently they have little power to pressure academic departments to get involved in online development. Another concern is that while online course are growing the staff to support these courses is not growing at the same rate.

They are trying to determine who is their target audience: is the province, the nation, the world? Related to that question is the question of what should the priorities be for course development?

What are your overall plans for the future TEL developments? Realistic and optimistic.

Memorial is going in a very positive direction. They are moving ahead, are aware of learner needs and are supply those needs in a sensible and practical manner. Memorial is a major supplier of online courses and this will grow into the international market place. They are currently grappling with service issues for an international student: i.e. invigilation, dealing with time zones, course material, etc.

Appendix H:

Minnesota:

3. Minnesota Virtual University Gary Langer January 9, 2001
4. Lake Superior College Barry Dahl January 19, 2001

Date: January 09, 2001
Name: Gary Langer
Institution: Minnesota Virtual University
Location: Minnesota
Website: www.mnvu.org
Background: Minnesota Virtual University acts as the broker for online course for a number of state universities. Eighty institutions are involved, the biggest being the University of Minnesota. This also includes 28 two-year schools, technical colleges and a number of private trainers. Both credit and non-credit institutions are involved.

9. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Pre-enrolment services are the responsibility of the home institution.

Currently the Minnesota Virtual University acts as a co-ordinating body for both academic and work related training. They have two Websites. One Website is devoted to providing information on the services provided through Minnesota universities. The other site is a career and employment planning site.

They are presently discussing the development of a seamless online registration process but the progress is slow.

Curriculum: How do you ensure academic excellence?

Minnesota Virtual University is not involved in any curriculum development. Minnesota is slowly developing its credit brokering capabilities.

Support for Users – How do you maximise student success?

They are developing a call centre for students who are having difficulty navigating the system and getting hooked up to a school. The call centre will be accessible through email and telephone.

Employment Services

They have no online employment services.

2. TEL Infrastructure and Support

They supply no online technical support.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Eventually the Minnesota Virtual University will disappear, as member institutions become virtual. In the short term the Minnesota Virtual University will encourage more resources for online services, support the development of online courses and student services.

At this time many private liberal arts colleges are not interested in online development. They prospering with their on-campus students.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Minnesota Virtual University is having difficulty accessing start up funding. There are also difficulties freeing up instructors to develop courses. One problem is that because on-campus enrolment is up faculty see no need to spend extra time developing online course.

Because of rural out-migration and factory closures there is some interest in using technology to bring education opportunities to these areas. This is one of the reasons the State Legislature is debating increasing bandwidth across the state. They are even investigating wireless technologies.

Last year the State allocated \$1,000,000 (US) to fund TEL proposals. There are also partnerships between institutions as a means to pool resources.

An ELearning Task Force has been created. It is doing a market survey and a technology survey. The Task Force will a develop a strategic plan. They also want to establish an evolving fund to help institutions develop online courses and programs.

What are your overall plans for the future TEL developments? Realistic and optimistic.

The climate in Minnesota is good for collaboration. The big problem is resources. The State does not put a lot of money towards online technology but expects a lot. There has been a large turn over in instructors. Langer expects new instructors to be more receptive to online options.

Date: January 19, 2001
Name: Barry Dahl
Title: Online Faculty Co-ordinator
Institution: Lake Superior College
Location: Duluth, Minnesota
Website: www.lsc.cc.mn.us
Background: Lake Superior is a public College located in Duluth Minnesota. It grants two-year diplomas. Students can transfer to degree granting institutions.

1. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Pre-enrolment services are in a state of flux. There is an online counsellor and the Website has an online tutorial, which shows students what it is like to take an online course, and there is other material prospective students can review. However, there is no formal assessment of suitability for online study. Dahl would like a more formal process. There are problems with the current self-selection process and he would like to reduce the number of students who are not succeeding in an online environment.

No pre-enrolment costs are charged back to the student. Dahl estimates that pre-enrolment services to distance learners would cost between \$10,000 and \$15,000 (US) a year. As the College gets more involved with these students these costs will rise. Overall Dahl feels that, while there are start up costs, distance education is a cost savings for the College. The College infrastructure is already overburdened. Distance education can relieve the pressure for more infrastructure.

Privacy issues are not an issue the College has to address directly. The College leases server space from the University of Minnesota.

The State has moved towards a formalised credit transfer system with some first and second year Arts courses being transferable across all public institutions. For courses which are not part of the system there is more leeway with each institution establishing its own criteria. Most institutions require students to take a certain percentage of courses at that institution in order to earn a degree. Because Lake Superior is a provider of online courses it would benefit from a more organised credit transfer system.

Curriculum: How do you ensure academic excellence?

The College is continually developing online courses. They have 30 courses developed and another 20 are in development. Currently there are no full programs converted to online delivery. They are moving towards full programs in Arts and Business Departments.

Individual instructors, with approval of their Dean, spearhead course development. All instructors wanting to create an online course are required to complete an online training seminar held every summer. To date online course development has not been well organised. The College is forming an Audit Committee which will oversee the development of an online course strategic plan, approve online courses/programs for development and oversee quality control.

Instructors are compensated for training and development time in the amount of \$1,500 (US). There are no other direct costs for course development. The technical infrastructure has not changed much since online course development has taken place.

Delivery costs are those related to leasing the server. The College pays a \$50 (US) per course per offering fee plus \$250 (US) for each block of 100 students per course per offering.

Support for Users – How do you maximise student success?

Distance students have limited support services unless they can get to the campus. There is an online tutor and the College is developing an online help desk. There is limited online access to library resources.

The College is working on having all student services online (i.e. registration, financial services, student services, etc.)

The College has not dealt with accommodation needs to any great extent. There are few students enrolled in the online courses who have diverse support needs.

Employment Services

The College has no online employment services. Students have access to campus based services.

2. TEL Infrastructure and Support

Students are expected to supply their own computer. The Website lists technical standards which are fairly minimal for most courses. The College is involved in a

High School Connection Program. Access to these computers, however, is restricted.

The typical platform is WebCT but instructors are free to do their own thing. The College, and the State, are moving toward a standard policy. Eventually there will be three centrally housed platforms which each institution can access. Dahl is not sure if access to multiple platforms will be a benefit to the College. There are extra costs to developing course for multiple platforms as well as costs for converting existing online courses. Moreover there benefits to the students with having a single platform. Some students are frustrated when they have to learn new and/or different platforms.

The College provides some courses through interactive television but Dahl is seeing a decline in the use of this technology.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

Dahl is the central co-ordinator of TEL services. This is a new position (about four months old) and he is currently getting organised. He wants to initiate some long term planning. He would like an additional \$200,000 (US) earmarked for online education needs.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

There are three committees which have a role in TEL infrastructure planning: the Technology Systems Committee, the Equipment Committee and the Facilities Committees. These committees are semiautonomous and only two of them are solely concerned with technology issues. Consequently it is difficult to co-ordinate the committees' work.

How are TEL technical support services planned, co-ordinated and funded? What works well? Why? What problems and issues have been identified?

The Technical Systems Committee is responsible planning TEL support services. The Director of the IT Department is co-chair of the Technical Systems Committee.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

The development and acceptance of online courses has been rapid and well received by students, instructors and administration. Some instructors are opposed to taking the summer inline training session.

To date there has been little marketing of online courses and the College has been surprised with how successful they have been. As for attracting the true distance student this has been almost accidental. Dahl would estimate that 80-85% of online students are campus-based students. The number of true distance education students is increasing. Dahl would like to target the true distance learner and as full programs are put online there will be more advantages to marketing to that group.

What are your overall plans for the future TEL developments? Realistic and optimistic.

The College will be aggressively pursuing online course development. As the College gets a better handle on which courses are more suited to online delivery they will target those courses. This will entail working with specific faculty, encouraging some faculty to participate and recruiting faculty if necessary.

Appendix I:

Kentucky:

Kentucky Virtual University

Myk Garn

January 25, 2001

Date: January 25, 2001
Name: Myk Garn
Institution: Kentucky Virtual University
Location: Kentucky
Website: www.kcyu.org
Background: Kentucky Virtual University (KVU) is a brokering institution. They are aligned with post-secondary institutions around the state. Students who are registered through KVU will eventually be associated with one or more teaching institutes. KVU does no content development but does fund some content development.

KVU serves two markets: on-campus students and off-campus students.

10. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Prospective students complete an online registration form. This form also serves as the registration process with the KVU's partnering institutions. There is a \$25 (US) admission-processing fee.

KVU, which is a brokering institution, works with the students and providing institutions to assemble the student's program/degree. KVU has an online database where participating institutions list their online courses and programs.

Because KVU does not deliver any content and they are removed from many student support services. Their Website does, however, have a self-assessment guide to help prospective students assess their learning style.

Curriculum: How do you ensure academic excellence?

KVU offers 15 full degree/certificate programs and another 20 are under development. While some programs are collaborative efforts it is more common to have a single institute offer the complete program.

Kentucky post secondary schools are full. While this should be an impetus to distance education many institutions do not feel they have the capacity to provide off-campus course in addition to their on-campus activities. Generally speaking many institutions are too unfamiliar with the technology to be comfortable with it.

Course development is institutionally determined. Some institutions develop course for \$2,000 (US). Other institutions will spend from \$40,000 to \$100,000 (US) to develop course.

Support for Users – How do you maximise student success?

KVU is not involved in student support services.

Employment Services

KVU does not supply employment services.

2. TEL Infrastructure and Support

While each institution sets their own technology standards for distance based study most have minimal technical requirements for the off-campus student. According to a KVU survey many students access computers at work. KVU also has an arrangement with the National Guard to provide computer accessibility to KVU students.

As a brokering institution KVU cannot mandate then delivery platform. Each institution makes their own determinations. Garn would like to see more standardisation throughout the system. However, he still sees the need for some variation to meet different needs.

Kentucky has a number of distance education providers including Kentucky Education Television and the ITV Network. KVU sees online as the way of the future and is what they specialise in. KVU collaborates with Kentucky Education Television to develop hybrid courses.

KVU contracts with a private company to supply student support services such as a help desk, Website, registration, online catalogue, delivery platform (Blackboard) and server. KVU also operates a virtual library and a database which is accessible to all Kentucky residents.

KVU has a \$6,500,000 (US) budget, much of it devoted to the virtual library. KVU is funded by the state and there is no flow through charges to students.

Appendix J:

Western United States:

Western Governors University

Amy
Terjal

January 18, 2001

Date: January 18, 2001
Name: Amy Tejral
Institution: Western Governors University
Location: Utah
Website: www.wgu.edu
Background: Western Governors University (WGU) offers distance learning courses from dozens of colleges, universities, and corporations across the United States. Through WGU, provides based on "competency-based". Students can count skills and knowledge gained at other universities, on the job toward their WGU degree.

11. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

Most prospective students find out about Western Governors University (WGU) through their Website. Applicants are connected to a student enrolment advisor. The advisor does an intake interview to determine whether WGU will be a good match for the applicant. Typically the best fit are applicants who have some prior post-secondary education. Once admitted the student is attached to a mentor who works with the student to develop an academic action plan. Tejral believes this process to be very important as it ensures good fit between the student and WGU.

WGU is developing an online self-assessment program to help prospective students prepare for the demands of WGU and distance education.

WGU does not accept credit transfers. However, student can challenge a course and receive credit without taking the course.

Students pay \$3,500 (US) to cover the costs of administration, pre-enrolment and other students services. Students pay a per course tuition above the \$3,500 (US).

Curriculum: How do you ensure academic excellence?

WGU does not develop any courses. They provide a credit-brokering function in that they look for existing courses which match the student's need. WGU has a Director of Learning Resources which identifies content, monitors content of existing course and evaluates course content.

WGU does develop competencies. The WGU Program Council identifies programs for development and identifies competencies required to master the program. The Council is composed of educational and business experts. There

is also an Assessment Council which develops or selects appropriate assessment tools. Courses delivered by other institutions are then identified which meet the competencies.

Assessments are always completed in a remote centre, typically a college or university. WGU makes arrangements for the assessment and pays all proctoring and invigilation costs.

The providing educational institute is responsible for the delivery of the course. Most courses are online but this is not universal. There can also be great variety in where students receive their course. They can take courses from many different institutions. The common link is that all content is distance delivered. Currently students can receive full programs in six two-year degree programs, one Bachelor's program and one Master's program.

Support for Users – How do you maximise student success?

The primary contact for student support is the mentor. The mentor also acts as a go-between between the student and the institution delivering the course. Each delivering institution provides student support services which the WGU student can access. Typically the delivering institution has made a strong commitment to distance education.

WGU has not seen the need for computer and technical training. Most students self-select based on their computer literacy. Moreover general computer literacy is increasing across general population. If they do have problems their mentor is their contact. Students also have access to whatever technical support is provided by the delivering institution.

WGU has a password protected Website where students review marks, transcripts and other student information. They can also register and pay tuition online. WGU is developing an online pre-enrolment assessment tool. WGU contracts with the University of New Mexico for online library services.

Employment Services

WGU has not delved into employment services. However WGU has a number of corporate partners and these contacts may be explored in the future.

2. TEL Infrastructure and Support

Aside from their Website WGU supports no technical infrastructure.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

The WGU process works well. Program and Assessment Councils focus on students needs and how to satisfy those needs. The Councils are well supported and their members enjoy being part of the process. Program Council meets four times a year. It is a costly process but worth it.

WGU is working towards accreditation. They now have candidacy status just one step below full accreditation. Candidacy status is generally recognised by other educational institutions.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

WGU has a strong online student support system, using Banner 2000 software. They have experience transferring data files from one system to another. This is very time and dollar consuming.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

WGU is a private, non-profit organisation and therefore has a lot of autonomy. There are fewer bureaucratic hurdles in developing and enacting corporate mission and vision. At the same time have experience significant support from member states. Each state (19) contributed \$100,000 (US) in start up money. WGU is now self-sufficient and generates its own operating capital.

One challenge they are facing is gaining acceptance of their competency model.

What are your overall plans for the future TEL developments? Realistic and optimistic.

WGU wants to upgrade and expand their degree development. WGU is different from other similar organisations. Their primary markets are fully employed adults who require education to achieve their employment objectives.

Appendix K:

Australia:

Open Learning Agency

Jim Beck January 18, 2001

Date: January 18, 2001
Name: Jim Beck
Institution: Open Learning Agency
Location: Melbourne, Australia
Website: www.ola.edu.au
Background: The core business of OLA is credit brokering for post secondary schools. The OLA is a private institution owned by eight participating public universities. The OLA takes products produced by the partners and markets them to a wider market. Typical students cannot afford university or who are working and cannot get to a campus on regular basis.

The OLA is not an accredited university. All students have to attach themselves to one of the partnering universities. The OLA does, however, handle the credit transfers from the partnering universities and helps the student create a program which will meet their needs (i.e. degree, diploma, personal interest, etc.).

12. Services and Programs

Pre-Enrolment Learner Services: How do you ensure TEL is a good match for the student?

OLA has contracts with partnering universities to deliver courses, provide student support, counselling etc. OLA has a help desk (telephone). The help desk will provide initial enrolment support but the student is quickly transferred to a partnering university. They publish a handbook (which is also online). Within it is information on how to apply, available courses, etc. Counsellors and advisors are available. There is a questionnaire on the Website which helps potential students determine if distance education is right for them. The OLA has a student preparation course which students can enrol in for a fee. They also provide some general advice to people regarding student skills and time management.

About 60% of OLA students pay their own way. The other 40% access the government support scheme which is essentially a loan which they start repaying when their income reaches \$30,000 (AU) or more.

The OLA complies with all Australian privacy laws. They are very careful with online payments and personal information. Beck notes that some students come to OLA for the privacy it offers (i.e. study from home)

The cost for all pre-enrolment services is borne by OLA through tuition costs and other earnings. The cost to OLA for pre-enrolment services is about \$5 (AU) per unit (course) per student. OLA tuition is at the bottom end of public university

tuition levels. Typical university tuition is about \$700/course (AU) or \$5600/year (AU) while the OLA tuition is \$420/course (AU) or \$3500/year (AU).

The OLA's budget is about \$11,000,000 (AU). About \$9,000,000 (AU) in revenues are tuition's and the rest comes from royalties, interest, services contracts, etc. This compares to the typical university for which tuition's represents about 20 – 30% of income. The OLA's major expense are fees back to the universities for courses and material.

Curriculum: How do you ensure academic excellence?

Anybody can study any course without prerequisite, although they may be counselled where to start. Students can access vocational and academic courses through the OLA. Students who want to earn a degree have to register with an accredited university. In the past any student who wanted to pursue a degree had to physically transfer to a university. Students can now continue receiving their courses through OLA.

The OLA provides between 6,000 to 7,000 units (courses) supplied by the partnering universities. Eight units are the equivalent to one full year. The OLA provides about 25,000 units a year, which converts to about 3,100 Full Time Equivalent students. The predominate delivery method is paper, supplemented with radio and television. About 20% of course are delivered online. The direction of OLA is move to a web based environment. Most students access online course through their home computer or at a public access site.

Initially the OLA (and partnering universities) concentrated on courses easiest to deliver online. Consequently they have developed a wide range of arts courses, business courses and technology courses. The OLA's vocational programming focuses on major industry pathways, which currently includes the retail industry and information technology. Courses and programs which are technically challenging (i.e. engineering) are underrepresented at OLA.

Academic panels were established to define transfer credit criteria and to evaluate courses. Currently there is full transfer credit between all partnering universities (and most of the other 32 universities in Australia) for the first two years of most academic disciplines. Problems which occur are when one university wants to add courses which complement another university's program. In these situation they typically contract out to an expert to evaluate and decide if the course is eligible for credit transfer.

For the most part it is the decision of the partnering universities to decide which courses and programs will go online. The cost for developing an online course depends on the needs of the course. It costs about \$18,000 (AU) to transfer a paper based course to an online environment (this cost does not include the

original course content development). Highly interactive courses will cost about \$300,000 (AU).

Support for Users – How do you maximise student success?

The OLA contracts with a partnering university to supply library services. The contract is about \$200,000(AU)/year. The OLA help desk provides some academic support but they do not have the background. This may change as the OLA begins to assume delivery of online courses. They are budgeting a 24/7 annual cost of \$120,000 (AU) for technical support and \$360,000 (AU) for academic support. These cost are related to staff costs, not infrastructure costs. The service will be paid for by transferring dollars from the partnering universities

People with disabilities self identify for services. Beck guesses the OLA has a higher percentage of people with disabilities than the typical university. The OLA is legally obligated to provide services. Costs for services to people with disabilities are not entirely know, many costs are hidden within University budgets.

Employment Services

The OLA has virtually no employment services. They are building a relationship with a private recruitment agency.

2. TEL Infrastructure and Support

OLA assumes students are studying from home. Consequently they build online course which will be accessible to most home users.

Currently four technologies are being used: paper, television, radio and online. They are moving to a predominately online environment which will be supplemented with radio. Online courses are not developed in a standard platform as each university supplies the course. Over the next year OLA wants to move to a standardised delivery platform. This will mean the OLA will become the focal point for the development of courses. The OLA has looked at packaged online systems and have decided to developed their own operating system. Programming will take about one year to build. The cost of programming development and equipment will be in the \$1,000,000 (AU). There will be another \$3,000,000 (AU) to convert about 1/3 of the courses to the new system (based on \$18,000 per course @ 600 course).

It will cost about \$120,000(AU)/year to provide technical support and another \$300,000(AU)/year for maintaining the software line.

3. Planning and Co-ordination

How are TEL services and programs planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

The eight partnering universities provided the initial investment in the OLA. The OLA is now generating revenues such that it can now reinvest back into the partnering universities.

How are TEL infrastructure, equipment and software planned, co-ordinated and funded? What works well? What does not work well? Why? What problems and issues have been identified?

There needs to be better integration of technologies amongst the partnering universities. They have created a Portal Advisory Committee who will help push a more co-ordinated effort.

How are TEL technical support services planned, co-ordinated and funded? What works well? Why? What problems and issues have been identified?

The OLA relies on university services. Increasingly the OLA will assume more technical functions. They recently transferred an IT manager from one of the partnering universities to the OLA.

What organisational issues and problems have you faced in developing and marketing your TEL services? How did you overcome them? Are there current and future organisational issues you are currently dealing with?

There is more and more demand to deliver customised content to meet different student needs. Online technology and the new programming system they are developing will allow them to customise content and content delivery to meet different needs.

The OLA is looking towards greater linkages with private business. This is something which the partnering universities are uneasy with.

What are your overall plans for the future TEL developments? Realistic and optimistic.

OLA is not going to get rid of paper. They are still learning how to teach in an online world. They are asking the question, "What is a good teaching model for online delivery?"

Online delivery is directing them into a customer service model. They have to find ways to reach potential students and provide an environment which meets their needs.

OLA believes that coupling online with radio is a very powerful combination and will eliminate the need for television. This will create considerable cost savings.

Appendix L:

Contact List

1. British Columbia

David Porter

Amanda Harby

Adrian Kershaw

Don Kinasewich

2. Alberta

Clive Keen

3. Manitoba

Lori Wallace

David Rehaluk

4. Ontario

Debby Sefton

Gwen Wojda

Dell Schmucker

5. New Brunswick

Rory McGreal

David Roberts

6. Newfoundland

Genevieve Gallant

Glen Penny

7. Minnesota

Gary Langer

Barry Dahl

8. Kentucky

Myk Garn

9. Western United States

Amy Tejral

10. Australia

Jim Beck

British Columbia

Name: David Porter
Title: Executive Director, Product Development and Research Group
Institution: Open Learning Agency
Location: British Columbia
Telephone: (604) 431-3085
Email: davidp@ola.bc.ca
Website: www.ola.bc.ca
Background: The Open Learning Agency (OLA) is an umbrella organisation promoting lifelong learning, the provision of access, the development of instructional materials, and the educational use of technology in the provision of education and training.

Name: Amanda Harby
Title: Education Technology
Institution: C2T2
Location: British Columbia
Telephone: (250) 413-4468
Email: harby@ctt.bc.ca
Website: www.ctt.bc.ca
Background: C2T2 is a provincially funded agency working with post secondary institutions, helping them develop innovative curriculum and technology.

Name: Adrian Kershaw
Title: Vice President, Community and Distributed Learning Services
Institution: University College of the Cariboo
Location: Kamloops, British Columbia
Telephone: (250) 828-5163
Email: akershaw@cariboo.bc.ca
Website: www.cariboo.bc.ca
Background: University College of the Cariboo is a two-year degree granting institution. Its main in campus is in Kamloops, a sub-campus in Williams Lake and five Training and Education Centres.

Name: Don Kinasewich
Title: Manager
Institution: Distance Education Learning Centre
Location: Hundred Mile House, British Columbia
Telephone: (250) 395-3115
Email: dkinasewich@cariboo.bc.ca
Background: The Distance Education Learning Centre is operated by the University College of the Cariboo and is located at Hundred Mile House.

Alberta

Name: Clive Keen
Title: Manager, Web Integration Unit
Institution: Athabasca University
Location: Athabasca Alberta
Telephone: (780) 675-6112
Email: clivek@athabasca.ca
Website: www.athabascau.ca
Background: Athabasca University a leader in distance-education. Approximately 150,000 students have enrolled Athabasca's courses and programs since the Government of Alberta created the University in 1970.

Manitoba

Name: Lori Wallace
Title: Area Director Distance Education
Institution: University of Manitoba
Location: Winnipeg, Manitoba
Telephone: (204) 474-8042
Email: lwallac@ms.umanitoba.ca
Website: www.umnaitoba.ca
Background: The University of Manitoba is a member of Campus Manitoba. Campus Manitoba is a distance education consortium of the three provincial universities and all colleges.

Name: David Rehaluk
Title: Co-ordinator
Institution: Campus Manitoba Centre
Location: Dauphin, Manitoba
Telephone: (204) 638-4647
Email: davecmb@hotmail.com
Background: The mandate of the centre is to offer a selection of university courses in Arts & Sciences, Business Administration and Psychiatric Nursing to communities in west central Manitoba. Brandon University, the University of Manitoba, the University of Winnipeg and Athabasca University, provide the courses offered at the centre.

Ontario

Name: Debby Sefton
Title:
Institution: Contact North
Location: Thunder Bay, Ontario
Telephone: (807) 346 3108
Email: sefton@mail.cnorth.edu.on.ca
Website: www.cnorth.edu.on.ca
Background: Contact North works with a number of education institutions providing services to Northern Ontario. This includes thirteen post secondary institutions and seventeen school boards.

Name: Gwen Wojda
Title: Director, Part Time Studies/Distance Education
Institution: Lakehead University
Location: Thunder Bay, Ontario
Telephone: (807) 343-8748
Email: GWojda@sky.Lakeheadu.ca
Website: www.lakeheadu.ca
Background: Lakehead University is associated with two distance education consortia. Contact North which traditional distance education and the North West Video Conferencing Consortium which focuses on web based distance education.

Name: Dell Schmucker
Title: Information Systems Manger
 North West Video Conferencing Consortium
Institution: Keywatin-Patricia District School Board
Location: Dryden, Ontario
Telephone: (807) 223-1254
Email: dell.schmucker @kpdsb.on.ca
Website: www.kpdsb.on.ca

Background: **The North West Video Conferencing Consortium is comprised of four school boards in northern Ontario. The consortium operates 15 high speed internet sites in high schools stretching from the Manitoba border to the eastern**

end of Lake Superior.

New Brunswick

Name: Rory McGreal
Title: Executive Director
Institution: TeleEducation NB
Location: New Brunswick
Telephone: 506-444-4230
Email: rory@teleeducation.nb.ca
Website: nova.teleeducation.nb.ca
Background: TeleEducation New Brunswick promotes the development and delivery of distance education programs. Access to distance learning in New Brunswick is via a Shared Network of distance learning centres and globally via TeleCampus.

Name: David Roberts
Title: Executive Director
Institution: Connect NB
Location: Fredericton, New Brunswick
Telephone: (506) 444-4703
Email: drobotts@nbnet.nb.ca
Background: Connect NB ensures rural people were not technologically marginalised. Its mandate is to build and sustain 230 publicly access community centres in New Brunswick.

Newfoundland

Name: Genevieve Gallant
Title: Project Manager/Instructional Designer
Institution: Open Learning and Information Network
Location: Saint John's Newfoundland
Telephone: (709) 737-3431
Email: ggallant@mun.ca
Website: www.olin.nf.ca
Background: Open Learning and Information Network are content/service providers delivering learning through technology.

Name: Glen Penny
Title: Director, Department of Continuing Education
Institution: Memorial University
Location: Saint John's Newfoundland
Telephone: (709) 737-3077
Email: glenp@mun.ca
Website: www.mun.ca
Background: The School of Continuing Education provides distance education services for Memorial University.

Name: Gary Langer
Title:
Institution: Minnesota Virtual University
Location: Minnesota
Telephone: (651) 649-5772
Email: Gary.Langer@so.mnscu.edu
Website: www.mnvu.org
Background: Minnesota Virtual University acts as the broker for online course for a number of state universities.

Name: Barry Dahl
Title: Online Faculty Co-ordinator
Institution: Lake Superior College
Location: Duluth, Minnesota
Telephone: (218) 733-7690
Email: b.dahl@lsc.mnscu.edu
Website: www.lsc.cc.mn.us
Background: Lake Superior is a public college granting two-year diplomas. Students can transfer to degree granting institutions.

Kentucky

Name: Myk Garn
Title: Chief Academic Officer
Institution: Kentucky Virtual University
Location: Kentucky
Telephone: (502) 573-1555
Email: Myk.Garn@kyvu.org
Website: www.kcyu.org
Background: Kentucky Virtual University (KVU) is a brokering institution aligned with post-secondary institutions around the state.

Western United States

Name: Amy Tejral
Title: Director of University Affairs
Institution: Western Governors University
Location: Utah
Telephone: (801) 274-3280 Ext. 13
Email: atejral@wgu.edu
Website: www.wgu.edu
Background: Western Governors University (WGU) offers "competency-based" distance learning courses from dozens of colleges, universities, and corporations across the United States.

Austarlia

Name: Jim Beck
Title: Chief Executive Officer
Institution: Open Learning Agency
Location: Melbourne, Australia
Telephone: +61 3 9903 8902
Email: jim.beck@ola.edu.au
Website: www.ola.edu.au
Background: The Open Learning Agency is a credit brokering agency for post secondary schools. It facilitates credit transfers from partnering universities and helps the student create a program which will meet their needs.