Saskatchewan Instructional Development & Research Unit

A COMPARATIVE ASSESSMENT OF FOUR ONLINE LEARNING PROGRAMS

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March 2005

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by

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for

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ABSTRACT

This study examines and compares four on-line learning programs to assess their suitability and potential for meeting the learning needs of First Nations high schools and for upgrading students. The following question is addressed: What types of on-line learning show potential for meeting the unique needs of First Nations Alberta and Saskatchewan learners? A mixed method (both quantitative and qualitative) research approach was used. Particular attention was paid to the appropriateness of the programs for Aboriginal students, Alberta and Saskatchewan curricula congruence, the roles of teachers and facilitators, learner supports and resources, website design features, and potential learning barriers, as well as best practices. Data were gathered while visiting each of the four sites and by telephone interviews and discussions with administrators, staff, students and teachers. Data were also derived from an on-line student questionnaire. The websites of the four schools, and other related documents, were also analyzed. The results of the analysis of the information collected show that many excellent features are built into each program. Some features show potential for meeting First Nations student needs, while others raise issues about their acceptability, some because of inflexibility in their use and others because a purported need is, itself, an issue. Other program options that were not examined in this study may contain additional features that could have the potential of meeting First Nations needs.

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INTRODUCTION

It is well known that the educational achievement of First Nations people in Canada lags behind the rest of the population. It is also recognized that part of the reason for this is the lack of equal educational opportunities. In many cases, one of these inequities arises from the remoteness of the locations of the schools and the related problem of attracting well-qualified, culturally sensitive teachers who will commit to long-time service in these communities. Through First Nations initiatives and government and private-sector support, on-line programs have quickly become established as options that show promise in helping to 'level the playing field.'

Background

Advances in communications technology have led to provincial programs such as CommunityNet, in Saskatchewan, and SuperNet, in Alberta, to bring Internet services to communities in remote locations. Federal government programs, principally First Nations SchoolNet, have provided satellite dishes and other communications support to these communities. As a result, a number of on-line school programs and course options have recently been established in Saskatchewan and Alberta. These, together with existing distance learning schools, provide a number of options for First Nations wishing to participate in on-line distance learning.

The La Ronge-based Keewatin Career Development Corporation (KCDC), which manages First Nations SchoolNet for Alberta and Saskatchewan, among other education and career-development initiatives, was interested in instructional technology and distance learning for the social benefits it may provide First Nations peoples. More specifically, KCDC wanted to know more about the potential of some of the distance learning schools to meet First Nations student learning needs, so they could advise First Nations education authorities in Alberta and Saskatchewan who were interested in making use of distance learning in their schools. They chose four schools: (a) the Sunchild e-learning Community (i.e., Sunchild Cyberschool) located on the Sunchild Reserve, Alberta; (b) the Alberta Distance Learning Centre in Barrhead, Alberta; (c) Central iSchool in Regina, Saskatchewan; and (d) Masinahikana School in La Ronge. The terms *school* and *program* are used synonymously when discussing these particular four schools. With funding provided by Industry Canada, KCDC commissioned the Saskatchewan Instructional Development and Research Unit (SIDRU) of the University of Regina to conduct this study.

The purpose of the study is to examine and compare the four on-line learning schools to assess their suitability and potential to meet the unique learning needs of First Nations high school and adult upgrading students. The research addresses the question: What types of on-line learning programs show potential for meeting the unique learning needs of First Nations students? The intent is to find out what courses and other educational services these schools offer and what features and practices could be regarded as commendable. Particular attention is paid to the extent and appropriateness of offerings for Aboriginal students, Alberta and Saskatchewan curricula congruence, the roles of teachers and facilitators, software and hardware platforms and

tools, learner supports and resources, site design features, and potential learning barriers, as well as best practices.

First Nations' Learning Needs

In order to assess what types of distance learning programs meet the unique learning needs of First Nations students, it must be determined what these unique needs are. The supposed needs can be divided into two categories: (a) those arising from socioeconomic circumstances and geographical location and (b) those related to language and culture.

The socioeconomic circumstances and geographic location needs of First Nations peoples are well known. At the risk of overgeneralizing, it can be claimed that the socioeconomic disadvantages of First Nations communities in Canada are well known. Many communities are in remote, isolated locations, with far fewer services and opportunities than locations where most non-Aboriginal people live in Canada. Unemployment is high and living conditions often substandard. In many cases, it is not possible to offer high-quality education and broad educational opportunities. For students, these disadvantages can lead to transience, attendance problems, family problems, low school achievement (Greenall & Loizides, 2001), and low self-image (Agbo, 2002). These problems are not necessarily unique to First Nations because, under the same circumstances, non-Aboriginal communities would likely display similar characteristics. It is just that almost all these types of communities in Canada are First Nations communities. E-learning, however, may work to alleviate these issues. Prensky (2001) maintains that we are now teaching a generation of students in ways not designed for them, because they are the first to grow up with the new technology. Those students who are able to take advantage of the new technologies are variously known as the *N-gen* or *D-gen*, meaning Net generation and Digital generation, respectively. Prensky has dubbed them *Digital Natives*. Given the infrastructure and programs for e-learning, Aboriginals can take advantage of the educational and career opportunities that will surely follow, on the same footing as non-Aboriginals.

Language and culture needs are well documented, as are differences between Aboriginals and non-Aboriginals (e.g., Bell, 2004; Charlie, 2004; MacKenzie, 1998; Scollen & Scollen, 1981). For the purpose of this study, however, the researchers recognize that local community and educational leaders are best situated to assess the learning needs and challenges of their students, as well as the teaching practices that would best serve these students.

Additionally, in order to accomplish the purpose of this study, it is necessary to also sample the literature on what has been attempted in First Nations on-line distance learning in Canada, with particular attention to indicators of successful programs.

Indicators of Successful Programs

Few studies of on-line distance learning programs in Canada exist. Most studies refer to postsecondary rather than to secondary courses, and the on-line aspect is only one part of the

course. Videos, print and other materials that are not accessed on-line are often parts of these courses. In Alberta a member of the Athabasca Chipewyan First Nation studied the current technological competence and usage levels of various technologies on reserves (Voyageur, 2001). She claims that First Nations people are embracing technology. She cites Statistics Canada reports of a high number of female-headed, lone-parent families in the Aboriginal community. For these women, home study is particularly useful, and there are a number of suitable First Nations postsecondary distance learning programs for such students. Voyageur mentions that in one University of Alberta program approximately 70% of the students enrolled were of Aboriginal descent. Videoconferencing was delivered to six sites. Students were concerned with program planning and administration, and expressed the need for more effective program advising and career counseling and more courses. The program was deemed a moderate success with a 51% completion rate. Because of the flexible study structure with respect to time and place, other programs cited were deemed suitable for Aboriginal women.

The primary objective of another, more relevant study (Smith, 2000) was to identify and assess indicators of success in an Alberta K-12 education context. Aboriginal students were not singled out for separate study. The research addressed questions about variances in on-line approaches; whether the schools enhance or improve learning; the extent to which virtual schools differentiate the curriculum to meet the needs of individual students; the level of parent, student and teacher satisfaction with the virtual school context; and the characteristics of successful virtual schools. The findings showed that parents and students were satisfied with the programs, which resulted from the active participation of the students in their learning, the autonomous learning opportunities, and the absence of perceived negative peer influence and distractions. Other findings related to the 'any time, any place' learning opportunities; to the changing role of the teacher and the student; and to the interaction, collaboration, communication and socialization that virtual schools permit. Students and parents wanted more course options, tutorials, face-to-face interaction, and improved on-line mathematics instruction.

An important aspect of this study, not related to its findings, is the introduction of a term to describe a certain type of distance learner. *Home schooler* is well known in the education context of Alberta and Saskatchewan. This student follows the provincial curriculum for all their courses, at home, under the guidance of a parent or guardian. They must register with a provincial school for liaison purposes. *Adult student* is a term that refers to a student who is over the age of 19 (some jurisdictions consider age 21 to be the cutoff) and does not usually attend a K-12 school (although some schools do have programs that allow some adults to take courses in their schools). The *blended program student* is a not-so-well-known term that Smith (2000) used in her study. These are students who take some courses from an on-line school, either at home or at their local school, and all their other courses through attending a local school.

Although few, these studies do provide a partial backdrop for the discussion of the accomplishments of the four on-line distance learning schools in this study.

PROCEDURES

A mixed method approach - using both quantitative and qualitative procedures for collecting data, considering it, and reporting findings - was used in this study. To paint a comprehensive picture of each of the on-line schools studied, the quantitative aspect was a survey that gathered, summarized, and reported on facts and opinions collected from participants; this included an examination of documents. It was also felt this picture would be incomplete without examining why the participants felt the way they did, thus the need for a qualitative approach. Open-ended interview questions allowed respondents to provide comments, explanations, and justifications for their opinions.

Dimensions of the Study

A framework for the study, "Dimensions of the Study" (see Appendix A), was developed by the steering committee in consultation with the manager of KCDC. It consists of four major dimensions under which information was gathered about the four on-line schools. These dimensions included: (a) curriculum considerations, (b) distance learning considerations, (c) learner considerations, and (d) self-reflection. The curriculum considerations cover the extent of the courses; adherence to provincial requirements; adaptations, particularly those designed to attend to the needs of Aboriginal students; and assessment methods. The distance learning considerations include distance learning approaches; user friendliness; student support, including tutoring, counseling, and supervision; instructor and student roles; flexibility concerning assignments; and the amount of student/teacher and student/student interaction. To some extent, learner considerations overlap with aspects of other categories, but mainly relate to how students feel about their treatment in the program. The self-reflection dimension is primarily intended for the program directors, although both students and teachers are expected to reflect on their on-line learning experiences through considering aspects of the other dimensions. Most of the information on the visions of the schools is documented, but the directors were asked to reflect on where they saw their programs in relation to the stated visions and why they chose the current modes of on-line distance learning.

The Roles of the Researchers

There were three researchers for this study, as well as a five-member steering committee. The steering committee acted as a sounding board for the principal researcher and made a number of suggestions about procedures. It was planned that all three researchers, and to some extent the members of the steering committee, would take part in developing instruments and collecting data. In fact, all did participate in developing the framework of the study and the survey questionnaire, and the research team shared all aspects of the data collection, except the site visits. Only the principal researcher was available for the site visits at the times they could be scheduled. Also, the principal researcher took sole responsibility for preparing the final report. Each researcher also contributed to document examination and literature searching. The fact that all three researchers conducted interviews and document examination served to triangulate the data collection that helped overcome researcher bias and improve internal validity. Also, the peer

evaluation of the steering committee and the member-checking procedures helped strengthen the internal validity. The member-checking procedures consisted of sending a draft of their report on their on-line school to each of the school's directors for checks of inaccuracy and misinterpretation.

Data Collection

Data were to be collected through document examination; site visits to the on-line schools; in-person and telephone discussions and interviews with administrators, teachers and high school students of the on-line schools; and an on-line student survey. A convenience sample of persons interviewed or surveyed consisted of people who agreed to participate.

The document examination included scrutiny of the websites of the on-line schools and other on-line materials. Most of the research articles were referenced on-line, as was an article about a Sunchild Cyberschool student that appeared in the *Red Deer Advocate* newspaper. Curriculum guide information about Alberta and Saskatchewan high school courses, transfer credits, and on-line learning was collected from both on-line and print sources.

The four on-line schools of the study were chosen by the research sponsor, KCDC, and seemed to be good choices. On the one hand, ADLC and Central iSchool are the major players, providing on-line distance learning throughout their provinces. Both have the capability to offer the broadest range of choices of both courses and different forms of on-line learning within their provinces. On the other hand, Sunchild Cyberschool and Masinahikana School were set up to specifically serve First Nations students, although Masinahikana's mandate also includes other students from Saskatchewan's North. Both are major players that serve more than a dozen First Nations communities in their respective provinces. The principal researcher conducted observation, document examination, and discussion and interviews with students, teachers, and administrators at all four locations. At Sunchild School, a key teacher (local facilitator) was interviewed; at Stanley Mission, discussions took place with the local facilitator at a local site that receives on-line courses from Masinahikana.

Besides those interviewed at the sites, a Central iSchool teacher was interviewed in Moose Jaw at the school where she teaches. Interviews with all the other teachers and students were conducted over the telephone. The "Dimensions of the Study" document (see Appendix A) was used to guide the questions in the teacher and administrator interviews. These interviews began with a broad question or request such as "What is it like to be an on-line teacher?" or "Tell me about on-line teaching." Then, after probing questions (based on the answers received), the teachers and administrators were asked additional, relevant questions based on the "Dimensions" document. Student questions were designed to probe student responses to questions on the on-line questionnaire.

Table 1 shows the breakdown of the number of persons who were interviewed or provided input data in other ways. The inputs of the principal of Central iSchool and the director of education of the Tisdale school division were obtained from presentations attended by the principal researcher. The four administrators listed under 'Other' included the Tisdale director of

education who gave input on the on-line distance learning in his school division; the Gull Lake director of education, on the on-line program at Hazlet School; the Central iSchool staff member in charge of the resources database; and the Executive Director of the Alberta On-line Consortium who provided general information about K-12 on-line schools in Alberta. In addition to these four administrators, the registrar for Saskatchewan Learning provided information on transfer credits. In all, 41 individuals provided information.

Table 1

Number of Interviews or Other Input

	Students	**Teachers**	**Administrators**	**Facilitators**
ADLC	5	3	2	0
Central iSchool	3	3	2	0
Masinahikana	3	4	1	1
Sunchild	5	1	2	1
Other			4	

Another form of data collection was the On-line School Student Survey (see Appendix B or http://cat.uregina.ca/kcdc [for a limited time]) for ADLC and Central iSchool students. In all, 74 completed surveys were returned from the former school and 34 from the latter. The Masinahikana and Sunchild students who were interviewed were asked survey questions that were relevant to their on-line schools. This procedure was adopted because of the much lower enrollments of these schools compared to the other two schools, and because a number of the questions did not relate to their schools, which might lead to confusion and detract from the overall results of the survey.

As with the teacher interview protocol, the survey items were derived from the "Dimensions" document. A demographic section is comprised of questions about the school attended, their Aboriginal status, grade level, and courses completed. Section 1 is in the Yes⁄No and multiple-choice format and covers factual information about the content, requirements and supports of the on-line program. Section 2 consists of questions that rate the content, requirements and supports on a 4-point Lickert scale. The three scales used were: (a) *Frequently, Sometimes, Occasionally, Never*; (b) *Very Comfortable, Comfortable, Somewhat Comfortable, Uncomfortable*; and (c) *Very Satisfied, Satisfied, Somewhat Satisfied, Unsatisfied*. In Section 3, students were provided an expandable check box to enter additional comments. Almost every item in Sections 1 and 2 also contained expandable text blocks.

DATA ANALYSIS

The quantitative data from the questionnaires were analyzed using SPSS+ computer software. Frequencies and other descriptive statistics were generated for all questionnaire items. For the qualitative analyses, the comments from the items were scrutinized for possible explanations, justifications, and reasons why items were answered in particular ways. Comments of students who were interviewed were scrutinized in a like manner. Some of these comments were chosen to illustrate the reasoning behind student choices or to support discussion on any issues discovered. Similarly, teacher and administrator interview responses were examined and used to explain notable responses and to support discussion of issues. In addition, notable facts about the on-line schools, gathered from these interviews, were summarized in cases where the information could be generalized. Other salient facts and impressions, based on document examination and observation during the site visits, were integrated into the descriptions of the on-line schools or woven into the general discussion of on-line learning.

THE FOUR ON-LINE SCHOOLS

With minor exceptions, the results of all the data collected from documents, observations, interviews, and the student surveys were integrated into the following descriptions of the four on-line distance learning schools in this study.

Alberta Distance Learning Centre

The mission of the Alberta Distance Learning Centre (ADLC) is to provide effective, successful, and specialized distance learning opportunities. Their motto is "Success for every student," their logo is "Learning anywhere, anytime," and a slogan often used to describe the ADLC model is "we place the student at the center."

ADLC is a provincially funded public school in the Pembina Hills school division. The school claims to be a world leader in the delivery of distance learning programs to students in Grades 1 to 12. This distance learning program covers a full range of Alberta school subjects and is offered in both print and on-line formats. ADLC serves 20,000 students, with many more taking traditional print correspondence courses than on-line courses. There are many home school students, as well as full-time and blended-program students who take their courses in about 600 different schools throughout Alberta, the Northwest Territories, and Nunavut, as well as students from around the globe who wish to pursue their education using the Alberta Program of Studies. A large number of these students are adults, such as a 50 year old who was interviewed. The school places significant emphasis on the course completion rate of its students that recently increased from the low 70% to nearly 80%.

The Centre is set up like a school, with separate principals and staffs for each of the elementary, junior, and senior high school programs. The staff also includes counselors. One adult student who suffered from exam anxiety and anxiety attacks sought and received advice from one of the

school counselors. Students may even register in the Vista Virtual School as their school of attendance, even though there is no school building to attend. However, most students who are not home school students or who are adults register at a school in their district. About 80% of the students surveyed indicated they worked on their courses at home. ADLC does attempt ways to communicate with students and parents outside the on-line courses. Besides the counseling opportunities already mentioned, there are regularly scheduled, face-to-face parent-teacher conferences. There is also a Parent Advisory Council and even a high school graduation celebration, held in an urban area, for students of Vista Virtual School and others who are unable to take part in a local school ceremony.

ADLC attributes some of its success not only to its caring, experienced certified teachers and dedicated support personnel who assist students to achieve their educational goals, but also to the flexibility offered to students who may be working from home, abroad, or at traditional schools. Their teachers are full-time developers and course teachers. Some are located at the main ADLC site in Barrhead, Alberta, but most are distributed about the southern part of the province at centers in Edmonton, Calgary, Lethbridge, and other locations. These teachers undergo a highly competitive selection process before they are hired, and receive high-quality training and professional development while employed.

Students may take all, or part, of their course loads with ADLC, or they may take one or more ADLC courses through a contracted school. They state that one of the main reasons for taking the distance learning courses is the flexibility in, and autonomy of, both time and study management. This flexibility suits students, for instance, who are professional athletes that have to travel from time to time to compete. A number of students prefer to work alone and avoid school distractions or feel that a regular school environment does not meet their needs, for one reason or another. A whole range of other types of students - single parents; working adults; home school students; those in isolated locations, which may include farm families, northern residents or colony inhabitants such as Hutterites, as well as Aboriginals both on or off reserves - are able to take advantage of ADLC programs. Some small schools, which often are unable to offer a full range of courses, assist their students in taking advantage of the flexibility of the ADLC offerings. Because of timetable conflicts, even students attending high schools that offer a full range of courses have taken advantage of ADLC courses. Although most students are able to take courses at times convenient to them, there is still a fixed starting date and times and places where they have to write the Alberta government diploma exams. This is a provincial government requirement that is out of ADLC's control.

Just about every modern form of distance learning is available from ADLC except video conferencing. Although the traditional print packages, textbooks, and ordinary mail approach is used, the materials are often supplemented by audio- and videotape instruction, and fax and e-mail communications. For lab courses, lab experiment equipment and supplies are mailed to students.

ADLC's mandate demands that no course be solely delivered by electronic means (i.e., the Internet). Likely, this is related to the historical development of the Centre, which can be traced back to the print-based Alberta government correspondence school of 1923. However, many of

the courses are delivered on-line and, of course, use the Internet as the primary means of conveying course content and of interacting with students.

Desire2Learn is the current web-based courseware platform used. This proprietary software package was adopted as the most cost-effective solution for ADLC, after having used a different package for several years. It has all the usual asynchronous elements of a courseware package (i.e., student management and tracking, calendar, discussion board, assessment tools, and course content which can be displayed as normal web pages, or as slides, using applications such as PowerPoint). Videos and animated displays can and are sometimes used. The First Class software package is also used as an application. Also, there are many synchronous learning devices available (i.e., a whiteboard, audio, and virtual classroom software like Elluminate vClass). Elluminate vClass allows the creation of entire audio and whiteboard interactive lessons that may be archived for later use by students.

One might believe that such sophisticated learning enhancements would require that students have access to high-end computer platforms and communications devices, as well as sophisticated software. In most cases this is not required and, in cases where it is, it is usually feasible. Many courses can be accessed using a variety of lower end platforms that have become available in the last few years, as well as most operating systems and Internet browsers from the same time period. However, Apple Mac computers will not fully implement the synchronous on-line lessons. High-speed Internet access is an advantage, but not essential for most courses.

Those students who take ADLC courses, other than adults, are registered through an Alberta government-funded elementary or secondary school, including home school students. In these cases, the school is granted the same funding for each distance learning course a student takes, as is granted for courses taken directly from the local school. Usually these schools, or the school divisions they are part of, enter into an agreement with ADLC and, although they pay a portion of the government funding to ADLC for each distance learning course a student takes, a substantial portion is left for local use. This, of course, helps defray the cost of the school facilities the student uses, including any specialized hardware or software. In most cases these specialized requirements may already be available in the school. These funds also provide for the employment of local facilitators, usually reasonably well-educated teacher aides, rather than certified teachers. This is an extremely important point because ADLC claims that the success of their students is highly dependent on the quality of the local facilitation of the program. In support of this claim, ADLC mentions one especially successful case.

> *A particular facilitator of distance learning in one school in the northern part of the province manages the environment so well that the performance of the students has proved to be highly successful. She places students in separate rooms according to the kind of work they are engaging in. For instance, if they are doing off-line work on their courses, they will not be in a computer lab with those who are on-line. Of course, she supervises all the rooms in use, and generally helps facilitate the work and self-management of all the students.*

Not all students register with Alberta government-funded schools. Among these are adult students and on-reserve Aboriginal students. Some adults are able to access other forms of

government or private funding or postsecondary or other public or private Internet connections. Undoubtedly, some adult ADLC students must provide their own funding for the computer use and course fees. Students can rent the required computing equipment from ADLC at reasonable rates and also receive a rebate on their Internet connection costs. In the case of school age, on-reserve students, they are usually able to register with a reserve school funded by the Canadian government, and sometimes from other sources as well.

When a school division enters into a contractual arrangement with ADLC to obtain distance learning courses for some of their students, ADLC's identity may be hidden from the students, with the student's course interfacing with the local division instead. Home pages are specifically designed to identify the name, logo and other identifying features of the school division rather than that of ADLC. The intent is to add a personal, and perhaps more friendly, face to the program. Another aspect of this arms-length approach is that a team-teaching agreement may be negotiated. In such cases, ADLC course materials are used but, instead of an ADLC teacher, a locally employed teacher acts as the course instructor.

As mentioned, ADLC does have parent-teacher interviews in a few urban centers, but a number of parents and students are unable to attend. Thus, these local teachers are more able to add a personal touch in working with their students than are ADLC teachers. In fact, 80% of the students surveyed mentioned they had never met their teacher; however, some mentioned they were invited to meet their teacher, and some teachers verified that they do extend such invitations. In some cases, a possible further depersonalizing of a course may occur as a result of the large size of the program. An ADLC teacher may have a particularly high enrollment in a course, so high that the grading of assignments and examinations cannot be handled by the teacher alone. In these cases, the teacher may acquire markers who follow guidelines set by the teacher. This might be partially responsible for the fact that 22% of the students are unsatisfied with the grading.

Another disadvantage of the large size of the program is that it is difficult to cater to specific groups, such as Aboriginals, unless they are identifiable and grouped together in the same course. On the ADLC website, a case where this was possible is mentioned.

> *Krystal, Gary, and Eddie successfully completed Social 23 on-line in a customized program for First Nations students.*

As in mainstream classroom teaching, teachers must follow the provincially prescribed curriculum. One teacher said that, unless he knows that a number of students from a particular cultural group are in his class, he is not likely to adapt the course content to include material about that culture. Most ADLC students are *Satisfied* or *Very Satisfied* with distance learning, many saying they like on-line learning courses better than regular school classroom courses. They often find them as, or even more, demanding but feel the teachers are helpful and flexible. One very satisfied student comments:

> *Every coarse [sic] I've taken thus far through distance learning has been nothing short of remarkable. The teachers have been some of the best I've ever had. I cannot recommend my distance learning faculty enough. Great work, ADLC!*

This Grade 11 home school student also gives the following reason for taking distance learning classes.

> *Was very dissatisfied with the public school I was attending. I looked into distance learning and found the range of courses to be quite appealing.*

Here are the remarks of a Grade 12 home school student.

> *I have enjoyed distance learning and all that it offers. I am a stay-at-home mom so flexibility is important. I also have learning disabilities and find I work better in my own space where I can move around and stop when needed.*

As much as students feel help is available, they do not seek it. The use of tutors, whether paid for by the local school or by the students, is not high. While students believe they can interact sometimes with other students, they typically choose to do so only occasionally. Unfortunately, students give no reasons for any of these phenomena. There are a few complaints, as is to be expected, that range from the timing and security of assignment submission to the belief that the grading is not fair. One student offers these comments about both security and timing.

> *My experience with Alberta distance learning was overall good. The only thing I didn't quite like was when e-mailing assignments or tests to your teacher… sometimes they wouldn't get graded or sent for a couple of days.*

Another student claims that ADLC lost all her work that could mean she will fail the class. She said an ADLC person told her that she should keep backup copies. With respect to grading, 22% of the students surveyed feel it is unfair. One student who does not think it is unfair gives the following reason that typifies the comments of a number of other students responding positively to this item.

> *Teachers give precise instructions on how to fix problem areas and include logical and clear directions on how to improve my work.*

Usually, students who are unsatisfied with distance learning indicate it is because of their own personal learning and working-style preferences. One unsatisfied student makes the following comment:

> *I do not like distance learning, although it may be a beneficial way for kids to learn. I, myself, have trouble sitting down and doing the work. With how unstructured it is, I fell behind very rapidly.*

This was a Grade 11student who is taking the course at home because there was not enough room to take it in the school program. This student did receive instruction on equipment and software use, and sometimes did seek the teacher's help, but feels the grading is unfair.

Some ADLC developments that are close to implementation are:

1. An ESL program with four levels has been completed. A special feature is that it contains the typical illustrations of ESL textbooks, but in animated form. The program is designed for any second language learner, including Aboriginals whose first language is not English.

2. The delivery, in its entirety, of a distance learning IOP (vocational) certificate program that provides the same academic content and work-experience requirements as the one provided in Alberta schools.

3. Video conferencing incorporated into many of the existing Internet courses using the long awaited SuperNet being built for the Alberta government to provide high-speed Internet in rural and isolated areas of the province.

4. Mathematics K-8 and Reading K-7 remedial programs through ADLC from the international SuccessMaker® program are now available for registration.

ADCL does market the programs it offers. The school is willing to engage in partnerships and to sign formal contracts for their services with both provincially funded school districts and First Nations. This could include working with First Nations communities to help them obtain high-quality distance learning services designed to meet the unique needs encountered.

While developing and implementing these and other innovations in the future, the challenge for ADLC will be to keep the student at the center.

Central iSchool

Central iSchool is a part of the e-learning branch of Saskatchewan Learning and is associated with the Learning Technology Unit. In some ways, it overlaps with the Saskatchewan Government Correspondence School (SGCS), which is also part of the e-learning branch. Although the only courses offered by Central iSchool are on-line, the Correspondence School offers traditional, print-based correspondence and also a few on-line courses, as well as synchronous tutorials. Also, the Correspondence School recently took on the task of Central iSchool student registrations. Central iSchool, SGCS, and the school television broadcasts of the Saskatchewan Communications Network are sometimes referred to as the Saskatchewan Distance Learning Centre.

Besides its connection with Saskatchewan Learning, Central iSchool also receives direction from the Educational Technology Consortium (ETC) that is a partnership of all major educational organizations at the K-12 level in Saskatchewan. This includes the organizations representing teachers, school directors, school business personnel, and school trustees, as well as Saskatchewan Learning. It is governed by a board of directors with representation from each of these organizations and is managed by a director. It has five advisory committees whose members work at the K-12 education level. These committees deal with matters such as

information and communications technology, e-learning, e-business, professional development, and policy and legislation.

The visions the e-learning branch and ETC are, respectively,

> *Equitable access to quality teaching and learning opportunities for all Saskatchewan learners.*

> and

> *E-learning is learning that is enhanced and enriched by students and teachers using technology.*

ETC is in the process of developing three components to bring its vision to reality.

1. A one-stop, on-line, e-learning centre that links users to a wealth of on-line opportunities.

2. A central administrative hub that supports the e-learning centre, manages a province-wide technological infrastructure, organizes teacher in-service, and provides a variety of other administrative services.

3. School division and school actions that provide supports to students and teachers, such as appropriate hardware and software and site facilitators.

School-employed teachers, supported by the Learning Technology Unit staff, create the resource materials and develop the courses. Also, the course teachers are selected from Saskatchewan certified, school-employed teachers. Both the developers and the teachers are competitively selected from volunteers and perform their duties for Central iSchool as a regular part of their teaching load in the schools where they work. School boards are compensated for the release time needed. Teachers also receive a $4,000 professional development fund for the school year for educational activities approved by Saskatchewan Learning. Internet resource material that has been developed is placed in the resource bank and is available for use by any Saskatchewan-employed teacher and, for that matter, teachers or students from around the world.

The web-based teaching and learning platform used is the proprietary courseware called Blackboard. The province purchased a license for use that is extended, free, to all school-employed Saskatchewan teachers and some other eligible Saskatchewan educators. ETC has negotiated reduced costs for all teachers for some other software (such as various Microsoft and Adobe products) and distance learning software (such as WebTrain, an Internet-based conferencing tool that provides audio, text and whiteboard communication among students and a teacher). Blackboard has all the usual distance-learning components such as internal e-mail/drop box, discussion board, chat room, management tools and student tracking, and so forth.

Strong school support is recognized as one of the key ingredients of success for students taking Central iSchool courses. ETC and the e-learning branch have published guidelines for this support. Coordination of distance learning at the school level is deemed a must. Each student

should have a teacher facilitator, called a cooperating or support teacher. This teacher is required to collaborate with the on-line course teacher and is responsible for encouraging and helping students to manage their learning. The cooperating teacher is expected to act as exam proctor and also as the on-site trouble-shooter.

A small sample of course teachers of different subjects volunteered to be interviewed. They agreed they were very satisfied with most aspects of the Central iSchool distance learning program, giving it high praise and wanting to continue to teach on-line classes. They are very pleased with the Central iSchool training and help, and with other professional development opportunities they have had, especially the Saskatchewan teacher-developed learning resources. They are also very satisfied with the platform, Blackboard, and other tools they have used.

A few concerns were expressed. Some teachers felt that the amount of work involved in teaching the distance courses is greater than the amount of work involved in regular classroom teaching. For example, on occasion, they can receive a large number of e-mails from students in a day and find it difficult to respond in a timely fashion. At times the grading of papers can also be inordinately heavy, because they seem to need to evaluate students more often when they are at a distance. Nevertheless, they are very complimentary about Central iSchool, are enthusiastic about on-line teaching, and want to continue. ETC prefers to rotate teachers through the system because they feel it is a way for teachers to become more proficient in e-learning. This means that most teachers will not be allowed to consecutively teach a large number of on-line courses for Central iSchool.

None of the 34 Central iSchool students who answered the on-line survey are unsatisfied with their distance learning. One very satisfied student said,

> *I like how it is like correspondence and am able to pace myself and, at the same time, I am being pushed to get it finished because I know that there is a teacher at the other end. I enjoy being in 'my own class' kind of thing without having to sit in a desk listening to a teacher talk.*

This student is taking a Grade 11 course at the school, but does have a computer and Internet connection at home, where he sometimes goes on-line to work on the course. He said he takes the course, at a cost of only $25, because the school division pays the fee because the course is not offered at his school, but he still gets help from the local teachers and the on-line teacher.

However, student responses indicate some possible concerns that warrant discussion. While students acknowledge the support available from teachers and/or other students, they seldom access this support. This raises the question of why this gap exists. The fact that 97% of the students believe they can receive help from a teacher or facilitator when they have program difficulties seems to suggest there really is no problem. This is reinforced by the fact that only 15% use tutors.

Many student comments indicate strong support for teachers. Although 75% say they complete assignments on time, 97% say the teachers are flexible about due dates. About 12% of the students are unsatisfied with the teachers' grading of their assignments. This seems to be a

relatively small number, but it is probably worth following up in some way in an effort to improve the program. The student (quoted above) said:

> *I haven't found any of my work graded unreasonably. If ever I have a bad grade, I am allotted time to redo the assignment.*

Another student who thinks the grading is fair offered the following caution.

> *As long as there is feedback. Some classes I never got feedback on my assignments, project or test.*

This seems to be a concern of individual teacher performance, which could occur equally in regular school situations, than a concern of on-line courses. As long as teachers are flexible about assignment completion and provide constructive feedback, students are satisfied with the grading practices.

About 97% of students have never met their instructor. This is understandable because students taking a course could live anywhere in the province or beyond. Also, the teachers are fully employed in schools and do not have the time to travel to the many locations of their students. If more personalization is desired, consideration should be given to bringing the students, and perhaps their parents too, together with the teachers once or twice during a term.

Nearly 80% of students do some, or all, of their on-line coursework at a school. However, even though only 20% work exclusively at home, many said they also work at home on a computer with an Internet connection.

About one third of the students take distance learning courses because their local schools do not meet their needs. This could be scheduling problems or the courses they want to take are not offered, among other things. Another 20% take distance learning courses because of certain benefits such as flexibility of time and place for doing the course work. Another 40% mention other reasons such as work, travel, and avoiding the distractions of school classrooms.

At present, most students feel comfortable with the learning equipment and with distance learning as a whole. However, only 40% feel comfortable with distance learning when they first begin taking classes; therefore, distance learning seems to be improving many students' computer literacy.

There are some particular cases of special success using Central iSchool courses.

> *A highly successful program of use of Central iSchool courses is that adopted by Hazlet School in the Gull Lake school division. It uses what is called a 'blended approach' where there are some regular classroom courses mixed with some Internet ones. In Grade 12 fifty percent (50%) of courses are from Central iSchool, and the number is 30% for Grade 11. The school and the students are happy with this arrangement. It gives students an opportunity to take courses that would otherwise not be available. Students still have the same complement of teaching staff as they had before, and some of them act*

as cooperating teachers. Although some parents and teachers initially displayed skepticism, they have come to enjoy the fact there has been no loss in the achievement of the students, and that the management and tracking aspects of Blackboard helps them to keep closer tabs on student progress. Some of the other features of Blackboard have crept into the teaching of regular classes, and this is beginning to shape a whole new way of teaching.

While the school district did not adopt this program as a way of reducing staff, it was cognizant of the fact that some schools will likely be in jeopardy in the future because of declining rural population. This program was developed as a pilot to test what could become a reality in the future. Another reason for adoption is that, after graduating, students will be living and working in an increasingly complex technological environment, and that this learning through the Internet will stand them in good stead.

In the vision for distance learning at the K-12 level in Saskatchewan, it appears that the development of Internet learning resources and courses, and their delivery, should be placed in the hands of well-qualified, regular classroom teachers, but centrally assisted and coordinated by a provincial agency. Teachers are being prepared to assume these responsibilities through in-service training and access to distance learning tools to experiment within their own classrooms. The centralized assisting and coordinating functions are in place through the work of ETC and the e-learning branch of Saskatchewan Learning, in particular, the Central iSchool component. Nevertheless, this is not the only model currently being used in Saskatchewan.

The Saskatoon Catholic Cyberschool offers about 20 on-line courses to the Saskatoon Catholic school division students, and also to students from other jurisdiction for a fee or an exchange of services. The Tisdale school division uses some courses from the Central iSchool, and its teachers have taken advantage of the training provided by the staff of that school, but they have developed their own internal e-learning system, independent of ETC and Saskatchewan Learning.

One unique aspect of the Tisdale on-line courses is that teacher expertise in different schools is used to advantage. A teacher in one school may develop and deliver a course on-line to students in his own class and to students in classes in several other schools, as well as home schoolers. There will be a facilitating teacher at each of the receiving schools. Also a teacher in most of these schools will also be delivering an on-line course to his own students as well as students in other schools. In fact this amounts to a network with on-line class connections between all schools, with some two-way connections with the arrowheads representing the directions of the delivery. There are also multiple school on-line assignments like webquests. One such assignment is on the topic of space exploration. The students in each school involved receive instruction from their own classroom teacher. Then they explore the Internet for information, and perform cross-school joint presentations and jigsaw group discussions on-line. Both Blackboard and Moodle are used as the web-based platform, along with tools like webtrain. Both teachers and students feel that Moodle is more intuitive to learn and use than Blackboard, and teachers think it is easier to plan on and create modules. Students also like the fact that they can look up the content of future on-line lessons in advance.

As teachers become more skilled in the use of distance learning tools, might other school divisions decide to go it alone? If so, will ETC have to rethink its vision? The executive director of the e-learning branch does not believe this. She says,

> *Our goal is to build the capacity of school systems to 'do it themselves.' We see a future where the only requirement, centrally, is to put students requiring a class in touch with a teacher who has space available – and even that will be limited as school divisions increasingly use their own staff to meet the needs of students within their own school division, using the technology and training provided.*

It seems that ETC and the e-learning branch are off to a good start towards accomplishing this goal.

Masinahikana School

The vision of the Masinahikana On-line School is to:

1.   assist individuals in reaching their personal potential through flexible distance learning alternatives that respect personal lifestyle, language and culture.

2.   provide learning opportunities for completing high school that, otherwise, would not exist for returning adults and mature students in the northern Saskatchewan region.

Masinahikana School was created out of the Headwaters Project, as a partnership among First Nations in northern Saskatchewan, the Keewatin Career Development Corporation, and provincial organizations. Today the Northern Lights school division and Northlands College play important roles in the partnership. These agencies, together with Saskatchewan Learning and the Lac La Ronge Indian Band Education Branch that represents the First Nations, make up the steering committee. Although the school is available to all residents in northern Saskatchewan, it is particularly oriented towards Aboriginals, on or off reserve, as they represent, by far, the largest portion of the population.

Masinahikana has specific goals that are to:

1.   facilitate the development of individual capacity as lifelong independent learners.
     - provide structures that emphasize patterns and personal organizational models.
     - design learning experiences and resources that promote constructed learning.

2.   build effective distance learning communities.
     - on a regular basis, bring learners together through electronic forums to interact through synchronous ICT tools.
     - establish a sense of identity with the on-line learning community through sharing of ideas and information in small- and large-group electronic classroom environments.
     - bring learners together through face-to-face interactive events that facilitate a connection with the learning community and a common purpose.

3.   respect personal lifestyle, culture, and language.
    -    accommodate personal schedules through an asynchronous delivery of learning
         modules.

The provincially created program, CommunityNet, provides a wide area network and high-speed Internet to hundreds of communities in Saskatchewan, and is currently working to increase that number. A parallel network that makes use of satellite signals is providing similar services to smaller locations and First Nations communities. This has made it possible for Masinahikana School to offer courses in some 13 northern Saskatchewan communities to about 60 students, of which nearly 60%, or more, are adults enrolled in 10 or so courses. Some of these courses are academic - Science 10, Native Studies and English 10 - while other courses such as Practical and Applied Arts, Career and Work experience, and bridging mathematics are also offered. Because courses no higher than Grade 10 are currently being offered, students are encouraged to take Central iSchool courses to meet all other on-line learning needs. Two postsecondary, computer-related courses are offered, one for computer technician certification at the CISCO ITE1 level. Students pay a yearly fee of only 25 dollars, regardless of how many courses they take. This is usually covered by the agency that sponsors the student.

There are four well-qualified teachers, all centrally located at La Ronge, who design and teach the on-line courses. One of these teachers serves as the principal, another also acts in an administrative capacity, and a third is designated as a trainee. The entire staff is enthusiastic, innovative and experimental, work well together, team up on some courses, and continually exchange ideas and share responsibilities.

The students are divided among the four teachers for the purpose of assisting them with program aspects outside the specific course academic content. For example, teachers can track when, and for how long, students access a course on-line; their attendance at assemblies; and their records of meeting assignment deadlines. In this way, they can communicate with students to find out if they are experiencing difficulties in meeting the responsibilities of the courses and can respond to student-initiated communications on such matters. Teachers report that telephone use is high and is the main source of student-teacher communication. *Coach* is the name given to this role that teachers serve. Teachers also have face-to-face meetings with all their students twice, or possibly more, in some circumstances. There is a facilitator at each site to help students with technical, administrative and, in some cases, academic matters. In addition, there are funds available for hiring tutors, even though course teachers provide a great deal of personal academic assistance to students. The school places great emphasis on teamwork with local facilitators because they realize that local support is a key element of student success. The school needs to play a role in the selection of the facilitators to ensure a satisfactory working relationship.

Students may take one or several courses at the same time. These courses are divided into three, 10-week blocks rather than semesters. If students fall behind in a course, they may continue with the content over the next block. Of course, students can finish a course ahead of schedule if they want to. Students are satisfied with the program even though some admit having difficulty keeping up with the work at times. One student remarks,

> *It's good. I need it. I want to go to college.*

Students do make good use of the facilities to work on their programs. Some who have very young children prefer to work at home but others, perhaps with slightly older children, hire regular, daily baby sitters so they can be at the computer facility on a daily, full-time basis doing course work. Some even do most or all of their off-line schoolwork at the facility.

In addition to the previously mentioned courses, an orientation session about taking these courses on-line must be completed, on-line, by all students. There are also on-line interactive assemblies that are scheduled at 2-week intervals that students are expected to take part in. These cover topics of general interest that will help learners with their courses, such as communications and time management. A student at a computer access site comments:

> *I have a baby sitter so I come here all day. They (Masinahikana School) give me help on the computer, and he (the site facilitator) helps me too when I need it.*

Other courses being developed, or to be offered in the near future, are Skills for the 21st Century, which includes topics such as numeracy and communications and a practical arts course with forestry, mining, fishing and tourism modules.

Computer access is rarely a problem for students even though few own their own equipment. In almost all cases, students can use facilities at a reserve school or postsecondary community access centre. Many of the reserve schools are assisted in acquiring suitable equipment and Internet connections by First Nations SchoolNet. Students who can work only from home are assisted in acquiring computer equipment by the organization, Computers for Schools. Masinahikana school personnel will even upload the necessary software to students, if required. One student works exclusively at home and says:

> *This arrangement suits me fine because my baby is so young. They got me the equipment and loaded the programs. When my baby is older I will go back to school and get my Grade 12.*

The open-source, Internet-based courseware, Moodle, is used. The previous year another open-source package, Manhattan, was used, and it is still partly used for some applications. Many of the usual courseware elements (i.e., lessons, assignments and on-line tests, calendars, student management, chat rooms and discussions) are available. Another application, WebTrain, is used on top of Moodle for synchronous sessions but, because this is proprietary software, Masinahikana School has to pay each time they use it.

Masinahikana School is an evolving and innovative entity, so much so, that many new elements and methodologies will be appearing in the program over the next few years. Nevertheless, examination of the various aspects of the program in light of the stated goals reveals that the school is achieving these goals and satisfying its mission. The school works in partnership with the communities it serves and encourages independence by attempting to incorporate program elements that guide students along their pathways to learning. At the same time, personalization of the program is aimed at through face-to-face meetings, coaching, and assemblies.

One teacher characterized the school as personalized in a small way. The program is not large but it does, however, live up to the personalized designation. The term *personal* is stated a number of times in the objectives and is quite evident in the day-to-day workings of the program. The challenge will be to maintain this personalization as the program grows in terms of courses offered and students enrolled.

Masinahikana School would like to increase the number of school-age students it serves. It is producing a video for its website that highlights its services and successes. If they knew more about, many more students in northern Saskatchewan would likely be taking advantage of this alternative to regular high school. An associated program, not directly linked to Masinahikana School, is the Youth Technology Club. A number of youth throughout the northern part of Saskatchewan communicate through the Internet and learn about electronic technology and produce media items such as videos. Even if these youths are not current or future Masinahikana students, they are becoming part of *N-gen*. The school is also working with the Ontario First Nations e-learning organization, K-NET, to make changes that will improve the Moodle platform. Other platforms could also be investigated as well. It may be that no change is made, but periodically it is worthwhile to consider the pros and cons of a number of different platforms.

Sunchild Cyberschool

The Sunchild E-Learning Community is a part of the Sunchild First Nation Education Authority. From this perspective, it is federally funded and is recognized as a nonprofit private school by the Alberta government. It is also a corporate entity with private-sector sponsors who provide additional support. Sunchild has educational partnerships with public postsecondary institutions - Athabasca University, Red Deer College, and Southern Alberta Institute of Technology (SAIT) - and the private sector, CISCO, a computer-training institution. These partnerships are for the use or delivery of postsecondary courses or, in the case of CISCO, for courses that qualify students for CISCO computer technician certification. At the secondary level, it has contractual agreements with 10 First Nations, including Sunchild itself, throughout Alberta, from northeast to southwest. In all, about 250 students take Internet courses from Sunchild. They offer seven Alberta academic courses from Grades 9 to 12 (in each of English, social studies, and sciences); ten in mathematics; and ten Career Transitions courses in such areas as forestry and tourism, CALM, Psychology 20, and the CISCO ITE1 level certification.

In 1998 Sunchild First Nations leaders, knowing that high school completion rates of Aboriginal students were lower than those of non-Aboriginal students, decided to seek educational solutions to this problem. They knew that Aboriginal students face unique challenges such as family and legal difficulties, time away from class, moving to new homes, and access to qualified instructors. Some of these Aboriginal students were adults who wanted to upgrade their education for the future yet, at the same time, were coping with various adult responsibilities.

Sunchild First Nations efforts to address these unique challenges faced by Aboriginal students led to the development of an innovative e-learning model, designed specifically for First Nations students within Alberta government requirements and differing from conventional distance-learning approaches in the accountability and interaction between student and teacher. Course

content meets Alberta curriculum requirements but, where possible, First Nations content is incorporated. For instance, discussions about the 1999 Oka standoff of Mohawks in Quebec were incorporated into a course developed and taught by Jim Moreau, the principal. Nevertheless, it is more the teaching approach that is considered the key in catering to unique First Nations needs. Students are expected to be logged into the computer during class times and can speak to the teacher at any time through text messaging or a microphone (synchronous). In most cases, students work in a classroom environment where a Key Teacher addresses technical concerns and ensures student participation. Although the Key Teacher acts in a supervisory capacity in the classroom, the approach still encourages student self-motivation and organizational responsibility.

Experienced teachers design the courses and head the on-line classes. Students who miss class time or change residences can catch up by reviewing archived lessons. Achievement is tracked on a weekly basis so that intervention and support can be provided as soon as it becomes necessary. Sunchild now claims a 60% successful course completion rate and an 80% success rate in diploma or government exams.

Completion rates are only one measure of success. Both ADLC and Sunchild publish these rates and feel they are important indicators of success. It would be difficult to compare ADLC and Sunchild rates because their target student populations differ substantially. In fact, there is no widely agreed upon definition of what *completion rate* means. Among other means of measuring success are student and parent satisfaction and judgments about the extent of attainment of program goals.

Some of this success is attributed to Sunchild's work with communities prior to entering into agreements with them and their belief that the communities must value education and be committed to the success of the program. Sunchild believes they act as a franchiser: They provide a high-quality packaged program, which relies on local strength for success. Besides the course packages, which are developed using prescribed standards and guidelines and Sunchild instructors, Sunchild has developed student checklists and guidelines for Key Teachers. There is an expectation of solid community support before Sunchild will enter into a contract. They feel the program they offer is of high quality, but recognize that sound local facilitation is necessary for student success.

The Sunchild E-Learning Community represents a somewhat distributed learning approach. The file servers for the program are housed in Calgary. The principal of the school, and also a teacher, works out of Red Deer, although he does travel to school sites from time to time. There is a program coordinator, who is also the chief executive officer. As well as coordinating the educational side of the program, he meets his corporate responsibilities by assuming responsibility for managing, marketing, and public relations aspects. He works out of the Sunchild School on the reserve. The teachers are located at various places around the province, and the Key Teachers and students are spread throughout the province among the 10 locations that are served by the program. It is important that the key teachers are located at the delivery sites, because the teachers who deliver the courses are not; they tend to be located in several, more populace areas.

This school has a regular program as well as a number of students who are enrolled in the cyberschool courses. The main Key Teacher looks after the school's distance learning students and provides leadership and training for all the other Key Teachers who are distributed among the schools that offer Sunchild distance learning courses. The six teachers who develop and take responsibility for instruction of the academic courses are selected because most of them have a minimum of 10 years of teaching experience, and some as much as 30. They are academically well qualified, all possess a bachelor-level, some a master-level, degree and another, a PhD. But they are also well qualified in other ways thought relevant to the tasks they perform (i.e., commitment to teaching First Nations students). Two other instructors, both First Nations, are employed. One is responsible for teaching the CISCO courses and possesses computer technology qualifications; the other is responsible for the nonacademic CALM course and is suitably qualified for this.

Students use a variety of computer platforms and, since most students access the program through a reserve education authority, courseware and software, as well as adequate Internet access, present no problems. First Nations SchoolNet grants and Computers for Schools donations of computers offer some assistance to First Nations communities in this regard. The courseware used is WebCT that incorporates Elluminate for the synchronous lessons aspect. Sunchild is happy with both technologies. Students do receive help in using the hardware and software from both instructors and the Key Teachers, and do not appear to be having any difficulty.

Students are generally appreciative of the opportunity to take the program. They particularly like the idea of the regularly scheduled synchronous nature of the courses. They feel this helps them to stay on pace with their studies and receive immediate help from teachers. They also like the relative anonymity of the synchronous sessions. As far as help is concerned, students have a number of options. All the quotes that follow come from a November 2004 article about Sunchild Cyberschool that appeared in the *Red Deer Advocate* newspaper. The views of the student expressed in the article typify the feelings of the students who were interviewed for this study. This adult student, who wants to continue into postsecondary education, makes the following observation:

> *You know (the teacher) is not going to judge you. No one in the class is going to say something to make you feel you're not equal.*

Instructors do not meet with students personally as a matter of course, but do so 'virtually' through the synchronous lessons. In these situations, they are able to assist students immediately. Other means are somewhat ad hoc as far as students are concerned. They can also obtain help from the instructor asynchronously through the various communications means, such as e-mail. As they have a closer day-to-day working relationship with Key Teachers, students frequently obtain academic and technical help from them. Some students say they approach other teachers in their school. As the principal of Sunchild Cyberschool says, in the same article:

> *The key teacher knows the students very well. He knows the issues. I think that's one of the key secrets of our success. It would be distance education otherwise.*

The lack of flexibility of synchronous versus asynchronous learning is a possible issue that has actually been a concern of some parents, but has not emerged as a student concern. Sunchild supporters feel that the success of the program speaks for itself. Although video conferencing will be available for incorporation into courses in the near future, Sunchild has no plans to use the technology because they believe it will not enhance learning for First Nations students. Students tend to agree with this decision, perhaps because video conferencing would substantially remove the anonymity aspect of the lessons. However, to make a valid judgment in this regard, they would have to have had a certain amount of experience with synchronous learning that uses video conferencing.

Sunchild is not planning to expand into other provinces. As the program coordinator says, it does intend to contract its services to assist education authorities in other provinces to utilize and appropriately implement the 'Sunchild model.'

The Sunchild model has enjoyed considerable success among the First Nations schools it serves. In the newspaper article, concerning expansion in Alberta, the Sunchild director of education says:

> *We should be in 44 (First Nations) communities as far as I am concerned.*

The vision for the future is to continue to spread the Sunchild model to improve learning opportunities for First Nations students.

CURRICULUM AND TRANSFER CREDITS

All public and private K-12 schools in Alberta and Saskatchewan that receive provincial government funding must adhere to the curriculum of their respective province. Even though First Nations schools are federally funded, they do follow provincial curricula. The Council of Ministers of Education, an interprovincial government organization, has worked on and published interprovincial K-12 course equivalencies. Many of these equivalences among western provinces have resulted from agreement on the scope and sequences of the courses across these provinces and are known as curriculum protocols. As a result, both Saskatchewan and Alberta have established equivalencies of courses between the provinces for many high school courses. For instance, all academic and most nonacademic secondary mathematics courses have recognized equivalents in both provinces. In the case of a student moving from one province to the other and seeking transfer credit for some courses, the school principal uses the provincial guide, or performs an assessment, and makes a recommendation to the provincial government branch that deals with transfers and is the final arbiter.

The case for a student residing in a province, but taking a distance learning course from another province, and seeking transfer credit to the province of residence is quite different. Normally the course will not be accepted in the province of the student's residence, whether Alberta or Saskatchewan. In the case of Saskatchewan, for instance, the present policy is that only courses that follow the Saskatchewan curriculum and are taught by a certified teacher of a Saskatchewan

school may be eligible for credit. Also, only Saskatchewan residents, including those who are temporarily out of the province or country, and First Nations students who are Saskatchewan residents, may take Central iSchool or SGCS courses.

DISCUSSION AND CONCLUSIONS

The framework of the study consisted of four dimensions: curriculum considerations, distance learning and learner considerations, and common issues for consideration. Although there is considerable overlap among these dimensions, the discussion in this section treats each dimension separately and a more general discussion and conclusions follow.

Curriculum Considerations

Each of the four schools offers on-line high school courses. Both ADLC and Central iSchool offer the widest ranges, while at present Masinahikana does not offer provincial credit courses beyond Grade 10. Each of the courses adheres to curriculum requirements of the respective provinces. In the case of students transferring between the provinces, most of the courses should be eligible for transfer credit.

To some extent, all of the courses are restricted in the amount they are able to integrate Aboriginal content and considerations. The courses must follow prescribed curricula, and there is little room to go beyond this. The inclusion of Aboriginal content is most evident at the macro program level. Saskatchewan has a policy whereby Indian and Métis content must be incorporated into all courses. In fact, a consultant views each curriculum, looking only for this content and offering suggestions. There are Native and Aboriginal Studies courses that students can elect to take. These courses are devoted entirely to Aboriginal matters. There are other courses, especially social studies ones, that automatically devote varying amounts of attention to Aboriginal matter. Some other courses - such as English language arts that cover issues topics and visual art and music courses - could very easily include some Aboriginal content. Another English course deals with racial issues, but focuses on the problems of black Americans. There is a question of whether or not this is relevant to First Nations students (or other Canadian students). There are more than 50 print material items that could be included in curricula that are listed in the *Alberta 2005 Resource Catalog* for Aboriginal Studies 10, 20 and 30. Similar numbers of print materials, and bibliographies to accompany each curricula, are available in Saskatchewan, as well as the Office of the Treaty Commissioner multimedia kit that can be used in a variety of high school courses. The fact of the matter is that just how much Aboriginal material is included in courses in both provinces depends on the individual teacher. There was no evidence of any special effort to incorporate Aboriginal content in on-line courses of ADLC and Central iSchool, beyond that specified in the curriculum. As a survey of all the teachers of these courses was not conducted, there could be exceptions to this observation. The statement merely reflects an impression gained from the interviews and questionnaire data.

The case is a little different for Masinahikana and Sunchild. With few exceptions, the students are Aboriginal, and the courses are designed with that in mind. There is still the curriculum-compliance restriction and most of the published texts, particularly in mathematics and the sciences, make Aboriginal content adaptations. However, one Sunchild teacher mentioned the use of the Oka standoff of the Mohawk people as a topic he included in an English course. The impression gained from speaking with teachers and students in these schools is that most of the Aboriginal adaptation is in dealing with the students in ways that recognize both their socioeconomic situation and cultural values. Although the on-line teachers adopt this kind of approach, this kind of adaptation comes from the key teachers and facilitators, most of whom are Aboriginal themselves. It also stems from the context of the receiving sites. The educational governance of these sites is Aboriginal, and there is a strong Aboriginal presence in the lives of most of the students.

The same impression was gained about adaptations aimed at where the student lives, as was gained in the case of Aboriginal adaptations. When students come from a wide variety of locations, it is less likely that the curriculum will be adapted to where they live. Once again, the degree of adaptation depends on the individual teacher.

As far as assessment of student learning is concerned, a wide variety of procedures are used, ranging from the almost exclusive use of objective-type tests by a few teachers, to oral presentations and group projects, to the production of videos. An important concern of some of the students from Central iSchool and ADLC was the fairness of the grading. Student comments showed that when the teacher gave constructive feedback, the grading was more likely to be thought of as fair. The use of markers, other than the on-line teacher, and heavy workloads could be at the root of the problem.

Distance Learning and Learner Considerations

These two dimensions overlap so much that they are considered together in this section. The distance learning dimension is the one that exhibits greatest variance among the schools. The approach to discussions of the findings with respect to this dimension are discussed under the topics of who teaches the on-line courses, what resources and supports are available to the teacher and students, what is the working environment of the student, and what is the delivery model.

Each of the schools employs well-qualified teachers who meet their provincial government requirements to teach high school courses. However, the schools differ in how they use these teachers. Some schools employ a cluster approach where all teachers work together in one location. Others use a distributed approach, where teachers work at different locations. Yet another approach is to use a combination. In Saskatchewan the four teachers of the Masinahikana School work together in one location in La Ronge, which allows for maximum communication and close collaboration. The 23 teachers of the Central iSchool work at different locations around the province, although coincidentally a few may work in the same location, and even in the same school (as in the case of some Moose Jaw on-line teachers). In Alberta, the seven on-

line teachers work from different locations although coincidental situations of common locations have occurred. ADLC has a combination of both approaches. A large contingent works at Barrhead, with a smaller one at Edmonton where there is a local ADLC centre. On-line teachers also work in Calgary and Lethbridge where there are local centres, and at several other Alberta locations. ADLC also has markers, who are qualified to teach in the subject, situated at various locations throughout Alberta. Even though each of the schools using a full or partial-distributed teacher model has implemented a number of procedures to increase communication and collaboration among teachers, the rational conclusion is that the cluster model accomplishes this best.

Another way in which the schools differ is in the employment conditions of their on-line teachers. ADLC and Masinahikana employ teachers full time, so they can carry heavier teaching and support roles than in the other schools. Sunchild has a combination of full- and part-time teachers, while Central iSchool has all part-time, on-line teachers. The Central iSchool teachers all work as full-time teachers in their local schools and are given release time to carry out their on-line teacher duties. Also, ETC policy is to rotate many teachers through on-line teaching for Central iSchool as professional development in e-learning. Consequently, there is less likelihood that Central iSchool teachers will serve in that capacity for many years. The conclusion is that, although there may be less consistency in Central iSchool courses over the years in terms of both course characteristics and on-line teaching experience of teachers, there is likely to be more variation in teaching quality.

As far as on-line teaching resources are concerned, Saskatchewan is developing an impressive data bank housed in the Learning Technology Unit, and available to any teacher, including those of Central iSchool and Masinahikana School. Alberta on-line teachers also have a large number of on-line resources available to them. Although teachers from both provinces can draw resources from any available source, it is the intent of ETC that Saskatchewan teachers will be the developers and the Learning Technology Unit staff will be the coordinators, so that Saskatchewan teachers can use one-stop shopping for made-in-Saskatchewan on-line resources.

As far as equipment is concerned, those students who do their on-line work at a school have most of the nonconsumable equipment and Internet connection available in both Alberta and Saskatchewan. Adults and other students who prefer to work at home have to fend for themselves, although ADLC does refund on-line connection fees and rent out basic equipment. Other home school students or adults may qualify for equipment funding from other agencies. Any school, including First Nations schools, can acquire equipment free or at reduced costs from the agency, Computers for Schools, and home students may be able to access such equipment through a school. It appears that few students, especially First Nations ones, will be denied access to on-line courses because of lack of available equipment.

The most crucial support is facilitation at the locale where the students do their work. It is the choice of many students to work at home because they are more successful there, but some have no other choice but to work at home and may or may not be as successful there as they would be in a school environment. It is clear from the data collected that a key person facilitating students at school on-line workplaces is crucial to student success. Some students need little guidance, but others need more support while they are learning to be independent learners. Each school makes

a special effort to ensure that the receiving schools provide good facilitation. Sunchild and Masinahikana try to be involved in the selection of facilitators, as they rarely use qualified teachers. Sunchild has a key teacher (facilitator) training program, whereas Masinahikana's approach is much less formal. ADLC works with school principals and outlines its expectations of how a facilitator should work. ETC has developed guidelines for the work of local school cooperating teachers (facilitators). All those who serve in this capacity are regular teachers at the local school. Technical support helplines, and often local facilitators, are available in all programs for trouble shooting technical problems. In order to draw conclusions about these various approaches, one must first consider delivery methods.

There are only two basically different on-line delivery methods employed by the four schools, synchronous or asynchronous. Sunchild Cyberschool uses the synchronous delivery model. A timetable of regularly scheduled 'live' (synchronous) on-line course sessions is produced. Students taking the courses must be logged on at the times scheduled for synchronous for their courses. In the case of Sunchild, there is two-way audio communication and presentation board on which students, as well as teachers, can write or draw and on which websites, PowerPoint, graphics, and videos can be shared. The students can also exchange private communications with each other through text messaging. Except for the absence of video, teachers deliver lessons the same way as they might in a face-to-face classroom situation, without, of course, many of the nuances of those situations, such as nonverbal communication. The key teacher assumes the role of class organizer and disciplinarian, so together they adopt most of the role of a regular classroom teacher. In this model there is still much asynchronous learning for the student and teaching for the teacher.

The asynchronous models of the other three schools do include some synchronous teaching and learning episodes. In fact, ADLC has some regularly synchronous timetabled courses, much the same as the Sunchild ones, using the same synchronous tool, Elluminate. The two Saskatchewan schools have a less formal approach to scheduling synchronous lessons into some of the courses using the WebTrain tool. Masinahikana also uses synchronous sessions for its innovative by-weekly assemblies, at which times it employs two-way 'live' discussions with students about various learning issues. Teachers using asynchronous delivery methods view their roles more as course developers and learning facilitators, rather than stand-up lesson presenters or 'live' interactors.

Conclusions can now be drawn about the roles of facilitators and teachers under the two different delivery methods. Under each of these approaches, teachers assume very different roles. The teacher working asynchronously does not teach a class of students; each student is taught individually. Although the teacher working in the synchronous mode teaches in the same way as a stand-up classroom teacher, much of the classroom organization and disciplinary responsibility are removed, as are certain nuances (i.e., local classroom distractions and body language). In both synchronous and asynchronous teaching, some of the regular roles of a classroom teacher, as already mentioned, are usurped by the facilitator. Obviously, distance learning teachers are missing out on getting to know their students as intimately as regular classroom teachers. However, not having to organize or be responsible for student classroom behavior likely removes much of the stress from their teaching.

The differences in these two delivery modes also have some important ramifications for learners, the third dimension of the framework. Foremost is the fact that synchronous sessions remove the advantages of student choice of time and place to study. To take full advantage of the Sunchild model, students should be taking at least the synchronous portion of their on-line courses in a school environment. This brings along with it all the distractions of such environments. However, it can be very useful for students who need assistance in learning how to organize their work and manage their time. There are many adults and school-age home schoolers taking the on-line courses. Some of these students are capable of working alone, and may prefer that, others have parents or guardians to adopt the role of local site facilitator. Others may have no choice but to work away from a school and this may present a difficulty for some. There is an issue here. There are advantages and disadvantages to both modes and, as far as students are concerned, one size does not fit all. Sunchild and Masinahikana schools have mostly different target student populations. Sunchild caters mainly to in-school students, while Masinahikana School accommodates a number of students who have dropped out of school. It is important that First Nations education authorities define a program that meets the needs of the kinds of students they have.

As noted in the introduction, cultural differences between Aboriginal and non-Aboriginal peoples can be reflected in the learning needs and challenges of students. Sunchild Cyberschool leaders address this matter in their approach to on-line course delivery. They, and some First Nations students, believe that the anonymity of the synchronous lesson situation helps them. They are more inclined to speak up, and some feel this forces the teacher to be nonjudgmental. If the student does not wish to communicate by way of the microphone, they can still interact with the teacher and get an immediate, private response through text messaging. If video conferencing were used, students would still have this option. Although this study did not reveal any evidence of use of the Talking Circle, a certain form of it can be used in synchronous lessons. The teacher is in control of the microphones and whiteboard. It would be easy to pass the microphone around, with students having the choice to talk or not. On the asynchronous side, students have a chance to ponder and respond in their own time. In the synchronous situation, there is a bit more pressure to respond right away.

Not much evidence was collected concerning teacher assumptions about learners. The questionnaire revealed that little, if any, remedial help is available from ADLC or Central iSchool. ADLC has recently advertised a remedial mathematics, reading and writing course and developed an interactive on-line English as a Second Language course. With the other schools, the impression is that there is some recognition of the problem but the solutions are more ad hoc and often left in the hands of the individual teachers.

The final issue is that of cultural considerations in the curriculum. At the macro level, both provinces have made provision for learning about Aboriginal culture and social issues through the development of dedicated courses and have guidelines for incorporating Aboriginal content and concerns into other courses. Beyond this, on-line teachers are no less restricted than regular classroom teachers to incorporate Aboriginal aspects into their courses. The two schools, Sunchild and Masinahikana, that have designed their programs primarily for Aboriginal students, are in the best positions to adapt their courses for Aboriginal students. They can and do incorporate content about students' everyday lives, which is bound to raise topics concerning

Aboriginal culture. They also utilize the services of Elders in an advisory capacity, have Aboriginals on their advisory boards, and work with them to deliver the distance learning program. Many of the ways in which they interact with their students recognize the socioeconomic experiences of Aboriginal students as well as their culture.

As far as future plans are concerned, ADLC continues to expand its program by introducing new initiatives such as increased use of synchronous learning that incorporates video. Sunchild Cyberschool wants to involve many more First Nations communities in its distance learning program. There is also a desire to assist First Nations jurisdictions in other provinces to adopt and implement the Sunchild model appropriately. Masinahikana would like to serve other school-age students in the northern part of the province as an alternative high school, incorporate more courses relevant to living and working in the North, and continue to experiment to improve its program.

Finally, Central iSchool wishes to empower Saskatchewan teachers and school boards to enhance and enrich their program through the use of e-learning. It will continue to serve as a central resource to whatever extent and as long as it is needed.

COMMON ISSUES FOR CONSIDERATION

As a framework for the recommendations that follow in the next section, it is useful to look at the common issues that arise from the discussions of the four schools' e-learning programs. Obviously, from the discussion it is clear that the e-learning programs operate in widely divergent circumstances; however, it is equally clear that certain issues keep coming up that need consideration before First Nations agencies or schools take on e-learning programs.

- *Capacity*. Masinahikana services 60 students, while ADLC services 20,000. **The type, quality, and number of personnel, resources, systems, and supports necessary will depend greatly on the number of students First Nations schools and agencies wish to service**.

- *Quality of teachers and support staff and their use*. The four schools' e-learning programs used a variety of teachers and support staff, and each of the four schools' e-learning programs used these personnel in different ways. First Nations agencies and schools must assess the availability of personnel in their areas to support the programs in which they are interested.

- *Support*. All of the four schools' e-learning programs noted the need for a variety of supports, both at central locations and, most importantly, at the local level where the students are, to ensure student success. Supports ranged from professional supports - teachers, tutors, computer technicians, and counsellors - to community supports, such as Elders as advisors and parent advisory boards. **In fact, the two Aboriginal programs commented on the need to market the e-learning programs to the community in order to gain support before establishing the program in the community. Support was also best when it combined face-to-face meetings with on-line support such as e-mail correspondence or on-line**

assemblies. First Nations agencies and schools must assess the variety of support needed and that is available.

- *Access*. **While personnel of the four programs did not feel there were access issues (e.g., equipment and locations for study), a variety of points were mentioned that need to be addressed to ensure that students can, indeed, access e-learning programs**. Each community and each student will have different needs around access that must be accommodated.

- *Personalization … flexibility, autonomy, and anonymity*. Personalizing e-learning programs for students was considered important, but **difficulties manifest themselves: number of students, location of students, type of delivery, and individual student learning preferences**. Many students like the flexibility of e-learning programs, but some prefer synchronous delivery to keep them up to speed. Some students like the autonomy of e-learning programs, but others like to be in a school setting where they feel there is more supervision. Some students liked the anonymity conferred by e-learning programs, but others look forward to video-conferencing opportunities. Teachers, as well, face obstacles in personalizing programs for students (e.g., incorporating Aboriginal content into a variety of provincial curricula). Careful consideration of this issue in the local context should provide the variety necessary for personalizing e-learning programs for individual students.

These issues, studied by First Nations agencies and schools as well as local community leaders, will provide a sound basis for considering the establishment of e-learning programs for First Nations students.

RECOMMENDATIONS

It is clear from the description of the four schools that they enjoy considerable success. E-learning is becoming thought of as a new mode that can enhance and enrich school learning. First Nations education authority personnel can use this report as a starting point to familiarize themselves with the many aspects of online learning in Alberta and Saskatchewan, and to consider and discuss among themselves the several issues about such learning for First Nations. **It is recommended that:**

1. **First Nations conduct thorough needs assessments about their school systems, including any deficiencies, unmet needs, and available resources.**

   E-learning can be used to enhance and enrich school programs regardless of the need for using online courses. However, there may deficiencies in the schools that could be corrected by the adoption of e-learning in the schools. A low success rate of students might be one of these and the difficulty of attracting quality, long-term teaching staff may be another. The inability to offer a wide enough range of courses may be restricting educational opportunities. The target student population will have to be a major consideration. Beliefs of one's community about Aboriginal culture and local

socioeconomic hindrances to learning must be considered, and also the commitment of the parents and leaders in the community needs to be known. These and other possible areas of needs should be explored before considering whether or not to pursue the possibility of implementing one form or another of e-learning.

2. **First Nations collect more information to assist in making a decision about pursuing the possibility of implementing some form of e-learning.**

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In addition to this report, there are many sources of information about e-learning in Saskatchewan and Alberta. The Alberta Online Consortium has a wealth of information available, including a list of all Alberta First Nations with online programs. In Saskatchewan ETC and the e-learning branch also have much information about what is needed for a successful distance learning program. All four of the schools considered in this study seem willing to provide information and perhaps also advice. Information can also be obtained from First Nations SchoolNet, KCDC, and other organizations.

3. **First Nations consider the different options available from minimal use by classroom teachers to a full, locally developed, online program of courses.**

The minimal program might consist of training teachers to use a web-based courseware platform, like Blackboard, and existing web-based learning resources in their classrooms, to develop local online course delivery to students in schools of the community. In undertaking these initiatives, there should be consideration of the issues raised in this study. If online courses are desired, a decision will have to be made about whether the program of another agency should be adopted and whether student placements should be purchased in their online courses, or whether advice should be sought from other agencies about developing one's own program delivery of online courses. A decision will also have to be made about adopting a synchronous dominant or an asynchronous dominant mode of delivery. These kinds of decisions will need to be considered in the light of the information forthcoming from the needs assessment, and the additional information collected. Special consideration should be given beliefs of the community about First Nations culture and how this affects the way First Nations children learn. At the same time, the culture of the N-gen students should not be overlooked.

4. **First Nations should determine the costs involved in implementing the different kinds of models under consideration.**

Many agencies can be of assistance here, including First Nations SchoolNet and KCDC, provincial and federal government agencies, the leaders of the four schools in this study, and other school divisions that have adopted their own online courses and programs.

5. **First Nations' agencies should consider establishing a collaborative First Nations Virtual Campus. A domain check was performed and, at the present, www.fnvc.ca is still available.**

5.1   Examples of existing collaborative virtual campuses currently exist, and Canadian examples include the Canadian Virtual University and Campus Manitoba. Such virtual campuses act as managerial entities or clearinghouses that could catalog and promote course offerings from a number of partner institutions.

5.2   The First Nations Virtual Campus could also be designed to support a learning object or resource repository for the partner institutions. As there are rich learning materials being developed in all of the institutions studied, sharing these resources among several institutions would lead to reduced development costs, greater access to resources, and benefits to student learning.

6.   A user-friendly guide, based on this research, should be developed for First Nations shopping for online learning.

Many more online course programs exist than the ones described here. Also, there is a lack of awareness, especially among students, that online learning is an available option that might suit them. Marketing of the many programs might be assisted by the information included in the guide, and perhaps even shorter pamphlets.

7.   Agencies that can acquire funding for First Nations educational research should consider commissioning and funding further studies on the issues identified in this study, and on the local development and operation of e-learning and online course systems for First Nations schools.

The issues of the suitability of synchronous dominant or asynchronous dominant online courses for First Nations students, and the matter of what and how to incorporate First Nations content and considerations into online courses are in need of further study. The different roles of the teachers of online courses is also worthy of research, although perhaps a less pressing issue for First Nations. Finally, some First Nations communities may need help in developing e-learning and online course programs for their students. These can be pulled together from various sources, but why 're-invent the wheel'? A study could bring this information together and add important information to the current existing body of knowledge in these areas.

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[1] See Appendix C for a list of Links of Interest.

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APPENDICES

APPENDIX A

KCDC Study Dimensions

KCDC Study Dimensions

1. Curriculum Considerations

    - What courses/programs (K-12, postsecondary, etc) are offered, and how frequently are they offered?
    - To what extent is provincial curriculum represented in these courses/programs?
    - To what extent are courses/programs adapted for Aboriginal content/knowledge/life experiences?
    - What view of Aboriginal people/culture is represented in the curriculum?
    - How extensive are the curricular offerings?
    - To what extent are there curriculum adaptations for the area the students live in?
    - What curricular adaptations are made for individual learners?
    - What are the assessment and evaluation strategies? To what extent does assessment go beyond the regurgitation of information?

2. Distance Learning Considerations

    - How is the particular mode of distance learning structured (hardware use, software use, instructor role, learner role, setting, synchronous/ asynchronous etc)?
    - How user friendly is the mode of delivery?
    - What technical support is provided for students, instructors, administrators?
    - What pedagogical support is provided to students, instructors?
    - What academic/learning support is provided to students?
    - What technical support is provided to students, instructors?
    - What provision is made for students experiencing difficulty with reading, writing, mathematics etc?
    - How do instructors view their role?
    - What equipment does the learner require?
    - How are assignments completed and submitted?
    - How much and what kind of interaction occurs between learners and the instructor, and among learners?
    - What provision is made for students missing classes?
    - How much flexibility is there with start/finish dates?

3. Learner Considerations

    - Who is the target of this mode of distance learning (in school, out of school, postsecondary, remote areas, individuals, groups etc)?
    - Why do students take courses offered this way?
    - To what extent are instructional adaptations made for specific learners?
    - What assumptions about learners are implicit in the courses/programs (reading level, independence etc)?
    - How do learners experience distance learning (satisfaction, dissatisfaction, preferences etc)?

4. Self-reflection

- Each of the four agencies involved will be asked to reflect on its vision, mode of distance learning, and challenges. They will be asked to reflect on where they see themselves in relation to their vision. They will be asked why they have chosen their specified mode of distance learning (technology selected etc).

APPENDIX B

On-Line Survey

SIDRU
Saskatchewan Instructional Development & Research Unit

On-line School Student Survey

This survey consists of 3 sections, 1 page per section, and should take only approximately 5 mins to complete.

- Personal Information

  -

  - Section
    - 1
    - 2
    - 3
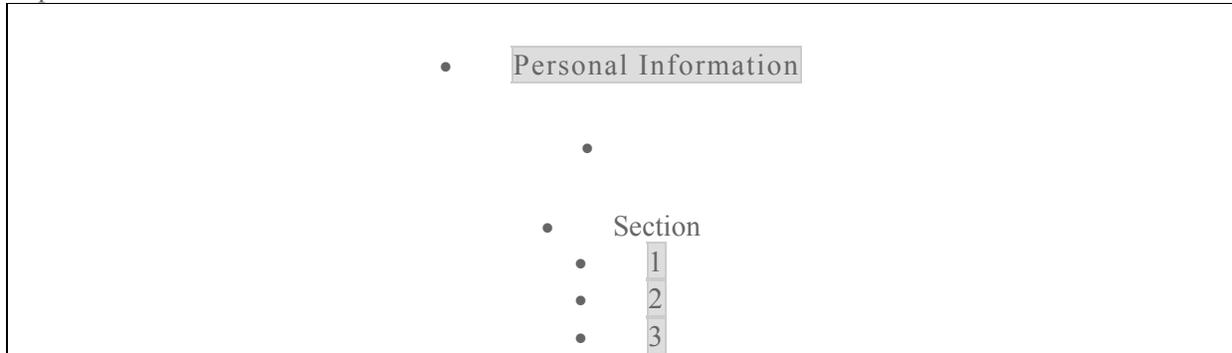
Your responses will be held in confidence, and you will remain anonymous unless you choose otherwise.

Would you like to remain anonymous?

○ Yes

○ No

Highest Grade Completed:

○ 9

○ 10

○ 11

○ 12

Current Grade:

○ 9

○ 10

○ 11

○ 12

Number of Distance Learning Courses you Have Completed:

[ ]

Number of Distance Learning Courses you Usually Take in one Year:

If possible, could you please identify yourself as one of the following?

○ Non-Aboriginal

○ Aboriginal (First Nations, Inuit, Mitis)

◉ I do not wish to identify myself

Which on-line school do / did you take a class with?

☐ Sunchild e- Learning Community

☐ Alberta Distance Learning Center

☐ Masinahikana

☐ Central iSchool (Saskatchewan Learning)

Section 1

Please select the correct responses by clicking on the appropriate circle or box. Feel free to comment in the boxes provided. Each text box is unlimited, so type as much as you like:

1. English is your first language:

○ Yes

○ No

2. Your distance learning program is taken:
   (check all that apply)

☐ at home

☐ at school

☐ Other

(please specify)

3. The reasons you are involved in distance learning:
   (check all that apply)

☐ too far to a regular school

☐ regular school does not meet my needs

☐ time of day that class occurs is more convenient than in regular schools

☐ prefer to work alone

☐ have a disability and find a regular school setting unsuitable

☐ find that there are various benefits to distance learning

(please specify)

☐ other

(please specify)

4. The equipment you require:
   (check all that apply)

☐ computer

☐ printer

☐ scanner

☐ portable storage media (disks, cds)

☐ textbooks

☐ high speed Internet

☐ dial up Internet

☐ writing tablet

☐ other

(please specify)

[text box]

5.

    a.   Is the equipment listed above supplied by your school?

    ○ Yes

    ○ No

    b.   Which, if any equipment do you supply? (please specify)

[text box]

6.   The cost for your courses is paid for by:

○ You

○ another organization

(please specify)

[text box]

7.   Did you receive instruction on:
    (please check all that apply)

☐ how to use the equipment?

☐ how to use the software, manage learning at a distance, seek assistance etc?

8.   Your assignments are/were forwarded to your instructor: (check all that apply)

☐ by regular mail (postal)

☐ by email

☐ by fax

☐ other

(please specify)

[text box]

9.

    a. If you have difficulty with your program, is/was there a person to contact?

    ○ Yes

    ○ No

If "yes," who is that person?
(e.g. teacher, facilitator)

[text box]

    b. Is/was a tutor available to you?

    ○ Yes

    ○ No

    c. If a tutor is/was available to you, how is/was this funded?

    ○ your school

    ○ you

    ○ another organization

(please specify)

[text box]

10. If you have/had difficulty with your equipment, is/was there a person to contact?

◻ Yes

◻ No

If "yes," who is that person?

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11. If you have/had difficulty in Math, Reading, Writing, etc., is/was there provisions for help?

◻ Yes

◻ No

If "yes," please specify

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12. Are/ were you able to complete your work in the time allotted?

◻ Yes

◻ No

13. Is/ was there flexibility in the due dates and times of assignments?

◻ Yes

◻ No

14. Are/were assignments other than tests and essays given? (e.g. portfolio, video)

◻ Yes

◻ No

If "yes," please specify

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│ ◄ │              │ ► │      │
└──┴───────────────────┴───────┴──┘
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15. Do you feel that the assessment (grading) of your work is/was fair?

⊙ Yes

⊙ No

If "yes," please specify

16. Are/were you able to receive: (check all that apply)

☐ personal counseling

☐ program counseling

17. Did you ever meet your instructor in person?

⊙ Yes

⊙ No

If "yes," please explain

Section 2

In this section please check one box using the following scale:

4	3	2	1
Frequently	Sometimes	Occasionally	Never

1. Are you able to take the courses at the time best suited to you?

⊙ 4

⊙ 3

☐ 2

☐ 1

2.

    a.   How often is/was the instructor available for discussion or for seeking help?

      ☐ 4

      ☐ 3

      ☐ 2

      ☐ 1

    b.   How often have you sought help from the instructor?

      ☐ 4

      ☐ 3

      ☐ 2

      ☐ 1

3.

    a.   Are/were you able to interact with other distance learners (students)?

      ☐ 4

      ☐ 3

      ☐ 2

      ☐ 1

    b.   How often have you interacted with other distance learners (students)?

      ☐ 4

      ☐ 3

      ☐ 2

      ☐ 1

In this section please check one box using the following scale:

4	3	2	1

Very Comfortable	Comfortable	Somewhat Comfortable	Uncomfortable

4. How comfortable were you with distance learning at the beginning?

- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1

5. Indicate your degree of comfort now or at the end of the last course you took.

- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1

6. Indicate your degree of comfort with the distance learning equipment:

- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1

7. In general, indicate your degree of satisfaction with the distance learning program:

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ Somewhat Satisfied
- ☐ Unsatisfied

Section 3

If you wish, please provide any additional comments regarding your experience with distance learning.

May we contact you if we have further questions?

○ Yes

⦿ No

☐ Send me a copy of the consent letter along with a self addressed and postage paid envelope.

APPENDIX C

Links of Interest

Links of Interest

www.adlc.ca   Alberta Distance Learning Centre

www.centralischool.ca   Central iSchool

http://school.edcentre.ca   Masinahikana School

www.sccyber.net   Sunchild Cyberschool

http://albertaonline.ab.ca   Alberta Online Consortium

http://elearning.utsa.edu/guides/LO-repositories.htm

                                             List of online web resource repositories

www.sasketc.ca   Education Technology Consortium

http://cat.uregina.ca/kcdc   Online School Student Survey