

State of the Nation: K-12 Online Learning in Canada

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Foreword

It is my pleasure to write the forward to the sixth edition of the *State of the Nation: K–12 Online Learning in Canada* report on behalf of the newly formed Canadian eLearning Network (CANeLearn). The report has become a key benchmark for the expanding use of technology-supported blended and online learning in Canada. Our newly formed CANeLearn network (<http://canelearn.net>) is a pan-Canadian group of K–12 online and blended learning schools and organizations that came together through cross-country initiatives including this *State of the Nation* report. As such, CANeLearn has become a key sponsor for this report and will continue to do so into the future. There is a separate issue paper in this report where readers can learn more about the network.

It is not surprising that Canada with its vast geography was an early leader in distance education and the use of technology to support universal access to learning for all students, particularly those in isolated rural communities. Technology-supported education continues to expand in the country as educators use online and blended (a mix of classroom and online methodologies) learning to increase education access, quality and student engagement. In some provinces Canada boasts the highest per capita student enrolment in online courses and programs of any jurisdiction in the world.

While access historically has been a key driver for the growth of online learning, blended learning approaches have emerged as a cost-effective alternative to supplement or replace traditional education programming. The number of students in Canada taking one or more online courses continues to grow in British Columbia, Quebec, Ontario and Manitoba. Online approaches have taken on renewed importance as jurisdictions such as the province of Alberta are reviewing how distance and distributed learning approaches can improve student achievement and completion within an education system faced with declining enrolments and budgets.

The brief issue papers in this publication shed light on some of the successes and challenges facing educators and government leaders as they continue to embrace technology-supported education. Combined with the quantitative information compiled for each province and territory in this report, the stories told in the vignettes included for each jurisdiction provide readers with a rich backdrop enhancing the mosaic of online and blended learning initiatives in Canada. Of particular note in this edition is a section devoted specifically to First Nations, Métis and Inuit (FNMI) programs. The FNMI brief issue papers shed further light on approaches supporting learning for this group of Canadians whose youth population continues to grow.

Canada is poised to continue to lead in online and blended learning and many jurisdictions are exploring how to leverage open education practices, including the use and creation of open education resources (OER) and Creative Commons licensing. This report can help provide guidance and ideas for the improvement of policy and practice to provide access to high quality educational opportunities for all students through online and blended learning. *State of the Nation: K–12 Online Learning in Canada* provides critical information and insight into how Canadian educational authorities and governments are integrating technology-supported approaches to prepare students for today's economy and a future society in which the use of technology will be ubiquitous.

State of the Nation: K-12 Online Learning in Canada concludes with a call for sponsors for the 2014 study. The Canadian eLearning Network has embraced this report, the research behind it and its importance to Canadians, but we need your help. There are still many gaps in understanding K-12 online and blended learning in the nation, in particular the availability of rich data and quality of research specific to Canada. Through the CANeLearn network we are looking for this report to become a key measure of the quality and expansion of online and blended learning in the country. Please contact us if you are able to support this important research.

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Canadian eLearning Network

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Executive Summary

Over the past fourteen years, there has been little federal funding for the development and research of K–12 online learning in Canada. . . . With limited government, foundation, and private support for education research, K–12 online learning programmes have not received financial support for research and evaluation. Moreover, there has been little activity in Canadian higher education towards research of K–12 online learning, compounded by the fact that there are fewer than five dozen Canadian universities, which limits the focus and scope of K–12 education research. As such, K–12 online learning has continued to develop across Canada quietly, and with little dissemination outside of the country and between individual provinces. (Barbour & Stewart, 2008, p. 5)

The section above was part of the opening paragraph of the first *State of the Nation: K–12 Online Learning in Canada* report. Now in its sixth year, not a lot has changed in the state of K–12 online and blended learning in Canada. The practice of K–12 online and blended learning continues to grow across Canada, although that growth remains uneven. Additionally, in some instances an increase or decrease in the reported level of participation in K–12 distance education may simply be due to better tracking by the government of that jurisdiction. There also continues to be a lack of research and evaluation into what constitutes the effective design, delivery and support for K–12 online learning.

During the 2011–12 school year there were 284,963 or 5.2% K–12 students enrolled in one or more distance education courses. This figure represented an increase of approximately 40,000 students from the previous school year. British Columbia and Alberta continue to lead the country, both in terms of the raw number and proportion of students participating in K–12 distance education. While there are students in every single province and territory, there are no active distance education programmes in Prince Edward Island or Nunavut.

There have been few changes during the 2011–12 school year to the regulation of K–12 distance education in Canada. The most common forms of regulation continue to be language in the *Education Act* or *Schools Act*, policy documents and contracts issued by the Ministry of Education and articles included in the collective bargaining agreement between the government and teachers' union. British Columbia continues to have the most structured regulatory regime, while Quebec and Saskatchewan continue to have no regulation at all for K–12 distance education.

Finally, this sixth edition of the *State of the Nation: K–12 Online Learning in Canada* report represents the first year that K–12 distance education programmes that fall under federal jurisdiction are accurately represented. All First Nations, Metis and Inuit (FNMI) education falls under the jurisdiction of Aboriginal Affairs and Northern Development Canada (AANDC). During the 2011–12 school year, there were five FNMI K–12 distance education programmes that operate under agreements signed between the education authorities that manage these programmes and AANDC, as well as provincial Ministries of Education in some instances.

1. Introduction

This is the sixth annual *State of the Nation: K–12 Online Learning in Canada* report. The first edition of this study stated that the goal of these annual reports was “to address the lack of information about K–12 online learning in Canada” (Barbour & Stewart, 2008, p. 5). Over the past six years, many positive steps have been taken to address the lack of information about K–12 distance education and online learning in Canada. While it is undeniable that these annual publications have improved the state of affairs in this respect, there are still significant gaps in the availability of data related to K–12 distance education in Canada, in particular regarding the amount of Canadian research focused on K–12 distance education.

In this sixth edition of the *State of the Nation: K–12 Online Learning in Canada* report, we update the provincial and territorial profiles that describe the governance and activity of K–12 distance education in each jurisdiction, along with providing additional vignettes to illustrate a variety of those individuals and programmes providing these learning opportunities. As with the previous reports, we continue to examine a variety of issues related to the provision of K–12 distance education in Canada. Finally, we continue to conduct a coast to coast-to-coast survey of each of the K–12 distance education programmes across the country.

1.1 Methodology

The methodology utilized for the 2013 study included:

- A survey that was sent to each of the Ministries of Education (see Appendix A for a copy of this survey)
- Follow-up interviews to clarify or expand on any of the responses contained in the survey,
- An analysis of documents from the Ministry of Education, often available in online format.

During that data collection process, officials from the Ministries of Education in all thirteen provinces and territories responded. The profiles were constructed based on these survey responses, along with information provided by key stakeholders involved in K–12 distance education in each respective province or territory and in some instances an analysis of available documents. Table 1 indicates the history of data collection for the *State of the Nation: K–12 Online Learning in Canada* study.

Table 1. Data collection sources for the State of the Nation: K–12 Online Learning in Canada over the past six years

Province/ Territory	2008	2009	2010	2011	2012	2013
NL	KS / DA	MoE / DA	DA	MoE	DA	MoE / DA
NS	DA	MoE / DA	MoE / DA	MoE / DA	MoE / DA	MoE
PE	DA	KS / DA	MoE	MoE	MoE	MoE
NB	DA	MoE / DA	MoE	MoE / DA	MoE	MoE
QC	KS	KS / DA	MoE / KS	MoE / KS	MoE / KS	MoE / KS
ON	KS / DA	KS / DA	KS / DA	MoE / DA	MoE / DA	MoE / KS
MB	KS	MoE / DA	MoE	MoE	MoE	MoE
SK	KS / DA	MoE	MoE	MoE / KS	MoE / KS	MoE / KS
AB	DA	KS / DA	KS / DA	MoE	MoE / DA	MoE / DA
BC	MoE / DA	MoE / DA	MoE	MoE	MoE	MoE
YT	DA	KS / DA	MoE / DA	MoE	MoE	MoE
NT	DA	MoE / DA	DA	MoE	MoE	MoE
NU	DA	MoE	MoE	MoE	MoE	MoE
Federal	-	-	-	-	-	AANDC / KS / DA

MoE – Ministry of Education, KS – Key stakeholders, DA – Document analysis, AANDC – Aboriginal Affairs & Northern Development Canada

Prior to publication, drafts of each profile were provided to the Ministries along with any key stakeholders that provided information for the profile. These individuals were given the opportunity to suggest revisions, most of which were accepted by the author (and all of which were seriously considered).

1.2 Definitions

As with the previous reports, for those familiar with K–12 online learning in the United States most of the terms utilized are consistent with terms used to describe K–12 online learning in Canada. There are some differences. Often in the United States, online charter schools and other full-time programmes are referred to as *cyber schools*. Charter schools do not exist in most Canadian provinces. In the sole province where they do exist, there are no online charter schools. As such, the terms *virtual school* and *cyber school* – along with *Internet high school* – are used interchangeably in the Canadian context.

In many Canadian jurisdictions, online learning is often only a portion of overall K–12 distance education offerings. Many provinces use the term distributed learning to describe all modes of delivery for K–12 distance education (i.e., print-based, video conferencing and online learning). Additionally, two other terms that may also be unfamiliar to a non-Canadian audience are:

Anglophone – English-speaking
Francophone – French-speaking

Also, in Canada there is no separation of church and state. As such, several provinces have both a government-funded public school system and a government-funded Catholic school system.

Finally, the author of this report makes use of the definitions provided by the Virtual School Glossary project (see <http://virtualschool.wikispaces.com/glossary/>) in most other areas.

1.3 How to Read This Document

The goal of the *State of the Nation: K–12 Online Learning in Canada* report is to provide an overview of the state of K–12 distance education in Canada. The report begins with a discussion of the trends of K–12 distance education over the past year (and to a lesser extent over the past six years, since this study first began. These trends are followed by a section presenting four brief issue papers. The brief issue papers explore issues related to the design, delivery, support and regulation of K–12 distance education in Canada.

The brief issue papers are followed by a national overview of K–12 distance education in Canada and a discussion of the nature of regulation and level of activity in each province and territory. As the format of the *State of the Nation: K–12 Online Learning in Canada* report follows this format each year, attempts have been made for the 2013 report to streamline the provincial and territorial profiles. Each profile includes:

- A short history of distance education in that province or territory
- A description of the K–12 distance education programmes and their level of activity
- The nature of regulation (with a focus on any updates from the 2012 report).

Accompanying some of the provincial profiles are vignettes, which are designed to provide a more personalized perspective of those involved in K–12 distance education in that jurisdiction.

The 2013 *State of the Nation: K–12 Online Learning in Canada* report introduces a new section focused specifically upon First Nations, Metis and Inuit (FNMI) education. In most instances educational programmes that serve these students fall under federal jurisdiction. These FNMI K–12 distance education programmes have been highlighted in the past five reports. However, up until now the report has not provided a nuanced understanding of the different regulatory structures within which FNMI programmes operate outside of the provincial guidelines. This new section follows a similar

format to other portions of the report. The section begins with a federal profile, followed by vignettes of each of the five FNMI K–12 distance education programmes and then brief issue papers focused specifically on FNMI K–12 distance education issues.

Finally, in the last section of the report data from the individual programme survey are provided. This section is organized in a regional fashion (i.e., Atlantic, Central, Western, Northern and federal), with the responses to the individual programme survey from each K–12 distance education programme reported.

2. Trends in Canadian K–12 Distance Education

The 2012 edition of the *State of the Nation: K–12 Online Learning in Canada* report began by quoting the history of K–12 distance education in Canada and concluded that “after five years of increased exposure to and focus on K–12 online learning, what we know of the history of K–12 distance education has remained fairly consistent and accurate” (Barbour, 2012, p. 13). The 2012 report suggested that these annual publications have added to what was known about K–12 distance education in Canada; it also indicated “even those involved in Canadian K–12 distance education often have a better understanding of the American context than of what is happening in their own country” (p. 13). Interestingly, the development of K–12 distance education in Canada was quite similar to its development in the United States, with the exception of the past fifteen years. Since the advent of K–12 online learning there has been a distinct difference between the nature of activity and regulation in both countries (Barbour, 2013). This is why it is more important than ever for the Canadian context to be regularly examined and understood for the unique perspective it provides.

Over the past year four trends have persisted and continue to persist within the Canadian K–12 distance education context:

1. K–12 distance education continues to grow each year.
2. Better data collection is needed to be able to understand the exact level of K–12 distance education.
3. Unions continue to remain cautiously supportive of K–12 distance education.
4. More research is required into the design, delivery and support of K–12 distance education to help policy makers make better informed regulatory decisions.

2.1 K–12 Distance Education Continues to Grow

The Canadian Teachers Federation (2000) appears to have provided the first published estimates K–12 distance education participation levels in Canada. At the time, it was thought that there were approximately 25,000 K–12 students enrolled in distance education courses for the 1999–2000 school year. Nine years later, the second *State of the Nation: K–12 Online Learning in Canada* report estimated that there were approximately 140,000 students participating in K–12 distance education in Canada. This number has continued to grow each year.

Table 2. K–12 distance education student enrolment in Canada

Year	# of distance education students	% of students engaged in distance education
1999–2000	~25,000	0.5%
2008–09	~140,000	2.7%
2009–10	150,000–175,000	2.9%–3.4%
2010–11	207,096	4.2%
2011–12	245,252	4.9%
2012–13	284,963	5.2%

As has been indicated in the past, the growth has been steady each year for the past five years. In some instances this represents a true growth in the number of students participating in K–12 distance education. The increased level of participation in some jurisdictions may also be representative of better reporting measures that Ministries of Education have implemented to track participation in K–12 distance education.

2.2 Better Data is Needed

The 2012 *State of the Nation: K–12 Online Learning in Canada* report stated:

While the growth in recent years has been steady, it should be noted that there are still some jurisdictions where the Ministry does not collect data related to distance education enrolment. Depending on the level of cooperation with the annual State of the Nation: K–12 Online Learning in Canada study, the enrolment figures are sometimes accurate estimates and in other instances they are simply a best guess.... It is also possible that some of the growth has been a by-product of simply more accurate data collection (Barbour, 2012, pp. 13–14).

Even though this report represents the sixth annual *State of the Nation: K–12 Online Learning in Canada* study, this lack of reliable data continues to persist in some jurisdictions. There are some jurisdictions that maintain dependable lists of K–12 distance education programmes and counts of students involved in distance education. For example, the British Columbia Ministry of Education is able to provide a complete list and contact information for all 74 individual K–12 distance education programmes, as well as the fact that there were 78,650 students – representing 20,441 full-time equivalents – enrolled in distance education during the 2011–12 school year.

Similarly, the Newfoundland and Labrador Ministry of Education was able to indicate that there were 1,232 student registrations, representing 2,064 individual course registrations. Further, the *Education Statistics: Elementary and Secondary 2012–13* report details that there were 64 males and 75 females for a total of 139 students enrolled in the Mathematics 2200 course (Government of

Newfoundland and Labrador, 2013, p. 32). This is just one example of the level of information that is provided for all 40 distance education courses.

However, there are still several jurisdictions where the data is unreliable, dated, or simply not collected. For example, the Saskatchewan Ministry of Education indicated that there were 2,611 K–12 students who participated in distance education during the 2012–13. These 2,611 students were enrolled in one or more courses from the 14 programmes listed in the Saskatchewan Distance Learning Course Repository. However, research for this report found that there are at least 21 programmes or jurisdictions providing K–12 distance education opportunities. Based on the responses of only five of these 21 programmes, there appears to be at least 5,665 students who have taken at least one distance education course in the Province of Saskatchewan.

Similarly, the Province of Ontario collects multiple data points. According to the Ministry:

Within Ontario's e-Learning Strategy, the Ministry of Education has three methods for obtaining data on student participation in e-learning and blended learning. Official e-learning data is generated from the October Reports and the Ministry's Education Statistics and Analysis Branch provides this information, which is used to inform decisions. Unfortunately, there is a lag of one year in the availability of this information from the year it is collected. Less official ways for E-Learning Ontario to gather data on both e-learning and blended learning include the analytics feature in the provincial virtual learning environment/learning management system and by contacting the e-Learning Contact in each school board. (e-Learning Ontario, personal communication, December 4, 2013)

Essentially, there are three methods that Ontario uses to determine the level of participation in K–12 e-learning in the province. Official e-learning enrolment data for the 2012–13 school year won't be available until late winter or early spring 2014. The Ministry also collects unofficial data from the number of student accounts in the provincial learning management system (which includes students learning at a distance, students learning in a blended fashion and some students enrolled in face-to-face settings) and based on information provided by the Ministry-funded e-Learning representatives in each of the school districts. These multiple data points provide the Ministry with a robust landscape of possible levels of participation. However, the delay of almost one full year before official data is publicly available also hinders potential policy decisions.

Finally, there are other jurisdictions – such as Quebec – that do not collect data on the number of K–12 distance education enrolments. However, the responsibility does not rest solely with the provincial governments to maintain, or in the case of this study, provide this information. For example, over the past three years the *State of the Nation: K–12 Online Learning in Canada* study has conducted an individual programme survey of the 251 K–12 distance education programmes across the country. During that time there was a 26% response rate in 2011, a 14% response rate in 2012 and a 21% response rate this year (i.e., 2013). Combined programme responses from the three-year period indicate that 32% of K–12 distance education programmes have responded in any one of the three years.

Table 3. Summary of the number of K–12 distance education programmes that have participated from 2011–13

Province/Territory	Number of Programmes	Programmes Responding	Response Rate
NL	1	1	100%
NS	2	2	100%
PE	0	0	-
NB	2	2	100%
QC	3	3	100%
ON	82	29	35%
MB	38	8	21%
SK	21	9	43%
AB	21	5	24%
BC	74	14	19%
YT	1	1	100%
NT	1	1	100%
NU	0	0	-
Federal	5	5	100%
Total	251	80	32%

After three consecutive administrations of the individual programme survey, there are still 171 K–12 distance education programmes that have failed to respond to repeated e-mail and telephone requests for information. In addition to this reality, there are 32 K–12 distance education programmes for which we have no contact information at all. It is hoped that that this situation may improve in the coming year with the creation of the Canadian eLearning Network (CANeLearn). CANeLearn is a new pan-Canadian organization focused on K–12 online and blended learning—see the brief issue paper about the organization in the following section.

2.3 Unions Continue to Remain Cautiously Supportive

In the 2012 *State of the Nation: K–12 Online Learning in Canada* report, it was suggested that in the United States K–12 distance education “had been positioned by corporate reformers as a way to remove the involvement of unions and unionized teachers from the public education system (Barbour & Adelstein, 2013; Moe & Chubb, 2009; Peterson, 2010)” (Barbour, 2012, p. 16).

However, the report also stated that “within the Canadian context the supporters of K–12 online learning have not positioned it in such an ideological manner. As such, teacher unions have not reacted with the same negative position that we have seen south of the border. In Canada, unions have actually been quite supportive of K–12 distance education.... [but] unions have also been cautious in their approach to K–12 distance education” (p. 16). This trend continues.

The Alberta Teachers Association (ATA) is actually an excellent example of the cautious support exhibited by teachers' unions in Canada. The ATA have been a driving force behind the "Stop Distance Education Cuts" movement (see <http://stopdecuts.org>). According to the Facebook page that the ATA has created, "Students need choice and flexibility in their learning opportunities! By cutting funding to schools that use Distance Education, the government is effectively cutting choice and flexibility for students to complete their high school education" (ATA, 2013a, ¶1). However, at the same time the ATA has also been strongly opposed to the use of the computer-assisted instruction environments provided by full-time K–12 online learning programmes in the United States (McRae, 2013), as well as the introduction of full-time online charter schooling in the province (ATA, 2013b; Clements & Gibson, 2013).

As noted above, one of the difficulties in understanding K–12 distance education in the Canadian context is the lack of available research. Interestingly, one of the groups that have been most active in the systematic examination of K–12 distance education has been teachers' unions. For example, the Alberta Teachers Association commissioned a research study (i.e., *A Study of Teachers' Workload in Distributed Learning Environments: Flexibility, Accessibility & Permeable Boundaries*) that used an online survey and focus groups to address the following research questions:

1. How can distributed learning in Alberta be improved to enhance your working conditions?
2. In regards to distributed learning and your working conditions, what specifically should the ATA be advocating for on your behalf?
3. How should technology be used to support distributed learning?
4. What advice would you share with educators who are about to teach in a distributed learning environment for the first time? (McRae & Varnhagen, 2008, p. 3)

Similarly, the British Columbia Teachers Federation has also been active in conducting research into the design, delivery and support of K–12 online learning (e.g., Barbour & Adelstein, 2013; Hawkey & Kuehn, 2007; Kuehn, 2002; 2003; 2004; 2006; 2011; 2013). The focus of this research is profiled in one of the brief issue papers in this year's report. This research has all focused on understanding how teaching at a distance differs from teaching in the classroom and what impact that has on the workload and quality of life of members who teach at a distance.

2.4 More Research is Required

While teachers' unions have been active in conducting research into the design, delivery and support of K–12 online learning in Canada, they remain one of the few groups. In his review of the literature into K–12 online learning in general, Barbour (2013) indicated that the research into design, delivery and support of K–12 online learning had not kept pace with the growing practice of K–12 online learning. This is particularly true of the Canadian context.

In addition to the research that is being conducted by teachers' unions discussed above, the faculty at Memorial University of Newfoundland has been the only group that has systematically focused on conducting research on the design, delivery and support of K–12 online learning in Canada. The largest single initiative by the faculty at Memorial was the *Killick Centre for E-Learning Research*, which was funded through a federal Community-University Research Alliance (CURA) grant (see <http://www.mun.ca/killick/home/>). Details about each of the eight project themes of this initiative were featured in the 2011 *State of the Nation: K–12 Online Learning in Canada* report (see Barbour, 2011, pp. 14–21).

Beyond these research efforts, there have been numerous isolated examples of research into K–12 distance education in Canada. For example, the author of this report – Michael Barbour – has conducted numerous studies with the Centre for Distance Learning and Innovation in Newfoundland and Labrador (Barbour, 2005a, 2005b, 2007a, 2007b, 2008; Barbour & Cooze, 2004; Barbour & Hill, 2011; Barbour, McLaren, & Zhang, 2012; Barbour & Mulcahy, 2004, 2006, 2008, 2009; Barbour & Rich, 2007; Barbour & Siko, 2012; Barbour, Siko, Simuel-Everage, 2013; Barbour, Siko, Sumara, Simuel-Everage, 2013; Cooze & Barbour, 2005).

Similarly, Margaret Haughey and Bill Muirhead were also active in conducting single studies in the early years of K–12 online learning in Canada (Haughey, 1999, 2002, 2005; Haughey & Fenwick, 1996; Haughey & Muirhead, 1999, 2004; Muirhead, 1999). Another one of these isolated examples was the study that Tunison and Noonan (2001) conducted with a single K–12 distance education programme in Saskatchewan.

There are numerous examples of these isolated studies (the *State of the Nation: K–12 Online Learning in Canada* study included an annotated bibliography of literature into K–12 distance education up until 2009. See <http://virtualschool.wikispaces.com/bibliography>). While each contributes to the knowledge base on K–12 distance education in Canada, there have been few longitudinal research programmes designed to systematically improve the design, delivery and support of K–12 online learning. This lack of research – and literature in general – has also created a deficit of information available to policy makers to be able to inform the regulation of K–12 distance education.

3. Brief Issue Papers

The brief issue papers are designed to examine a range of issues that are current and relevant to either the regulation or implementation of K–12 distance education. The first of these brief issue papers describes a new pan-Canadian organization that is focused on K–12 online and blended learning. The second brief issue paper examines the potential of massive open online courses within the K–12 level environment, using examples that the author has recently been involved with. Further, as mentioned in the previous section, one of the more consistent sources of research into K–12 distance education has been teachers’ unions. The third brief issue paper is an example of this research from the British Columbia Teachers’ Federation. The final brief issue paper focuses on the course development process, an aspect of K–12 distance education that is often ignored in the literature, of the Virtual High School in Ontario.



3.1 Canadian eLearning Network – CANeLearn

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Acting Executive Director
CANeLearn

A new pan-Canadian network of K–12 online and blended learning schools and organizations – the Canadian e-Learning Network, or CANeLearn (<http://canelearn.net>) – was formed at a Montréal July 2013 Summit meeting of key stakeholders. CANeLearn’s mission is to provide leadership that champions student success in online and blended learning and provides members with networking, collaboration and research opportunities. Its initial focus is on sharing resources, professional development and research.

Key Canadian K–12 e-learning leaders have been meeting over the past several years to strategize how to support and promote online and blended learning in Canada. Meetings initiated at iNACOL conferences were continued at events across Canada during the 2012 –2013. At the July 2013 meeting, the group successfully agreed on how to move the shared initiative forward, including an organizational structure with a refined mission/purpose.

At the July Summit meeting, CANeLearn reached consensus to register federally as a not-for-profit corporation. The following individuals served as founding directors of the society and later took on directors’ roles pending the first Annual General Meeting of the organization:

- Michael Canuel, CEO of LEARN
- Vince Hill, CEO/Executive Director, Credenda Virtual High School Inc

- Terri Reid, Learning Service Coordinator, Black Gold Regional Division No.18: Black Gold Online Program
- Howard Burston, Director, IT Manitoba First Nations Education Resource Centre
- Michael Barbour, Director of Doctoral Studies, Sacred Heart University
- Greg Bitgood, Superintendent, Heritage Christian Schools
- Kevin Wttewaall, Director of Technology for Learning, Rocky View School Division.

The July meeting also confirmed that Randy LaBonte would take on the role of Acting Executive Director and Verena Roberts would serve as Acting Chief Innovation Officer.

The group's initial focus is on:

- Creating strategies to support the pooling and sharing of resources, including creating a repository to support this
- Fostering professional development specific to blended and online learning
- Finding new ways to measure learning success.

As a network of provincial online or e-learning programmes, CANeLearn's purposes are to:

- Support networking between and among programme providers to build relationships, enhance communications, share resources and best practices and encourage innovation
- Collaborate through supporting partnerships, sharing professional learning opportunities, and finding efficiencies through technologies and shared services
- Stay current and participate in research studies, promote research opportunities, and disseminate research results
- Work with post-secondary institutions to connect pre-service and in-service teachers to online and blended learning
- Inform policy and professional standards regionally, provincially and nationally
- Educate stakeholders and promote online and blended learning to all.

With a planned official launch for April 2014, the founding organizational members agreed to contribute an initial membership fee, with both individual membership and organizational membership fees to be determined at the first AGM. Interested organizations can join to become an inaugural member and provide input into the shaping of the organization.

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3.2 Open Learning and MOOCs in Canadian K–12 Online and Blended Learning Environments

Verena Roberts
Open and eLearning Consultant

What is a MOOC and what is open learning?

“MOOC” stands for “Massive Open Online Course.” Examples of MOOCs include online courses offered through Coursera, EdX, Udacity and one of the earliest examples of the MOOC, “Connectivism and Connected Knowledge.”

MOOCs were called the Innovative Disruption and Top Tech Trend of 2012 (Watters, 2012). The primary reason behind the suggested “disruption” involves a break in the traditional hierarchical system of higher educational institutions. Instead of offering education to a select few based on a fee, through MOOCs and open learning, education is being offered to the masses at no cost. By opening online courses to the public, professors from around the world encourage any learner to learn from and with any other. The MOOC model is student focused, in that it offers a cost-effective solution to education for all.

MOOCs themselves can be defined as either a “cMOOC” or an “xMOOC.” The primary difference between the two types of MOOCs is in the way that the course is designed and facilitated. xMOOCs, started in the United States by Thrun (2012) are usually based on a traditional online learning model focused on teacher-directed video lectures, discussion threads and computer-generated assessment practices.

In comparison, cMOOCs, founded in Canada by Downes, Siemens and Cormier (2009) promote connectivist principles of learning. cMOOCs promote self-directed learning involving interaction between learners through the use of social media networks, social media integration and connections to personal authentic learning opportunities.

Legislation and Limits to K–12 Open Learning

There are pockets of experimentation in K–12 open learning across Canada. “Open learning” may be defined as activities that either enhance learning opportunities within formal education systems or broaden learning opportunities beyond formal education systems (D’Antoni, 2009). Open learning involves but is not limited to:

- Classroom teaching methods and approaches to interactive learning

- Formats in work-related education and training
- The cultures and ecologies of learning communities
- The development and use of open educational resources (Bowen, 1987; Chang, 2010; Ehlers, 2013; Mason, 1991; Wilson, Schlapp, & Davidson, 2003).

While there is no agreed-upon, comprehensive definition of open learning, central focus is commonly placed on the “needs of the learner as perceived by the learner” (Coffey, 1988). Due to provincial Freedom of Information and Privacy (FOIP) legislation, student personal data security concerns, limited educator familiarity with open learning and school districts’ policies, there can be a digital divide between Canadian students who have access to open learning opportunities in school and those who do not. This brief describes how Canadian educators have been addressing these concerns and opening the walls of their classrooms.

MOOCifying K–12

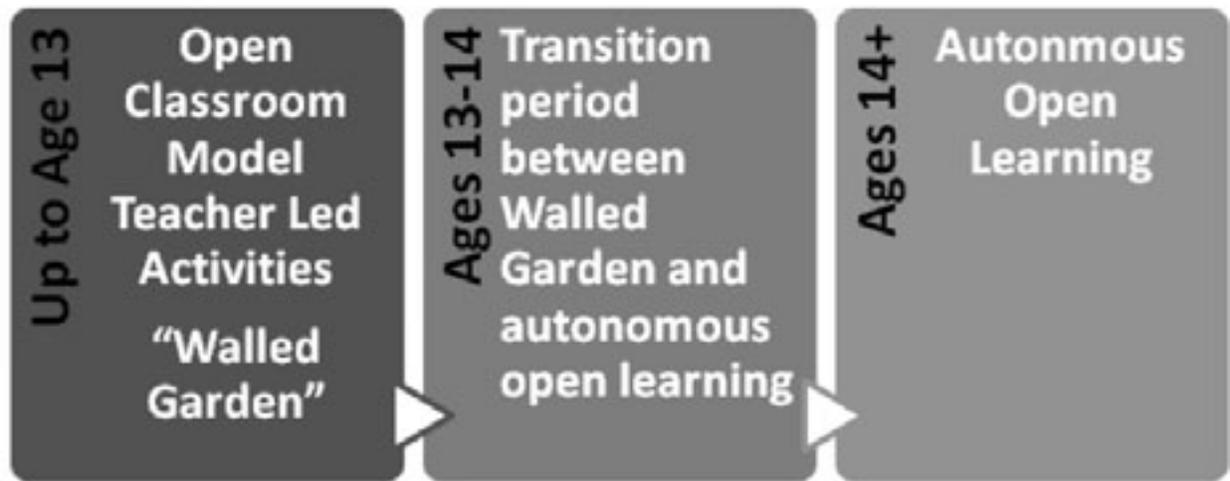
One of the strengths of the K–12 system is the ability to develop relationships with students because K–12 schools do not have “massive” course sizes. Similarly, in K–12 we do not necessarily need “courses” at all. In K–12 there is support to promote cross-curricular, inquiry-based projects based on solving problems that encourage students to innovate and construct their own learning. As such, MOOCs may not be the most pedagogically sound recommendation for K–12, due to the passive transmission of information that they may involve. Instead, K–12 educators are encouraged to use the “best practices” of MOOCs to develop the strengths of our K–12 learning environments:

By MOOCifying K–12, I have discovered the importance of relationships, peer feedback, modeling, support, scaffolding, collaborations, risk taking and digital identity in open online learning environments. To MOOCify your K–12 learning environment consider short, student directed, open projects that promote authentic inquiry-based learning with an emphasis on social media integration and networked learning (Roberts, 2013).

Specifically, MOOC best practices include:

- Rethinking how we teach and why
- Offering authentic digital experiences and skills for students
- Giving the opportunity to construct relationships and connections with learners from all over the world

Figure 1. Stages of open learning



Stages of Open Learning

Open learning can be integrated in stages. An educator can integrate social networks and interactions into closed learning management systems (LMSs) like Canvas Instructure or closed digital artifacts, such as blogs or wikis. This stage is teacher directed and the students would be limited to specific open educational content with learning interactions limited to specific participants. This type of learning environment would be considered a walled garden, in that the open learning is restricted by some kind of digital wall. Specifically, this means that the learners interact with each other and the public can “see” the interactions, but no one from “outside” the environment would be able to interact or collaborate with the learners without permission.

The second stage could be a course offered through a publicly viewable blog, or open LMS, so the public can see the course content and interactions; however, the participants and interactions are restricted. The public would be able to see participants interact, but they would not be able to interact with the participants. This method offers an opportunity for students to develop their digital identity and voice without the need to respond to public and anonymous feedback. The student content could be linked to and remixed by others, so the students would be developing their own open educational resources.

The final stage is creating a learning environment using an open digital tool like a wiki or blog or creating an open course in a LMS. The content is created by remixing or linking to open educational resources and promotes the students to create their own open content. The anonymous public can interact and give feedback to course participants.

In Canada, all three stages require signed authorization from a parent or guardian. The difference between the first two stages and the third is that the first two stages can be monitored by an educator. However, the third stage needs a larger learning community to monitor and ensure the safety of all students. One educator cannot be responsible for a stage three open learning environment in which students, parents and educators have to support, provide feedback and monitor each other.

Benefits of Open Learning

Developing an open classroom means creating opportunities for students to learn in the open, based on parental permission as well as student digital literacy level and digital identity awareness. Educators have to be prepared for students to have different abilities and comfort levels when encouraging open learning and must be respectful of the individual concerns of their students. However, by having an opportunity to learn in the open, students can make connections with learners, ideas and digital content from around the world. Students have authentic learning opportunities with the integration of social media. Open learning encourages students to use the digital tools and social networks they are already using outside the classroom. Experiencing the integration of social networks and tools into formal learning opportunities, students described deeper and more meaningful understanding because they interacted and engaged with more people and more digital content. Students were able to examine the impact of their digital identity through blogging, public interactions and peer feedback. They were encouraged to create their own course content based on their own passions and become self-directed learners. Open learning promotes different roles for educators and students because when you learn in the open—you learn together.

K–12 MOOCs

Verena Roberts offered the first K–12 focused MOOC, called #Digifoot12, in the summer of 2012. The MOOC explored digital citizenship for students, parents and educators. By partnering with Steve Hargadon and Classroom 2.0, she created and facilitated #Digifoot12 as a six week open online course. Roberts followed the cMOOC design by having weekly topics, guest facilitators and promoting learning through blogging and social networks. The course was offered through Wikispaces, the Student 2.0 Ning Network and MightyBell. With over 300 registered participants, the course offered educators, students, parents and anyone involved in education an opportunity to learn about digital citizenship by developing a digital identity through digital experiences.

Roberts was contracted by Alberta Distance Learning Centre (ADLC) in September 2012 to create open online opportunities and MOOCs for ADLC students and any other students who wished to participate. After examining open learning in K–12 learning contexts, the Open Classroom Model was created, based on a K–12 continuum of open learning practice. The Open Classroom model focuses on three strands of open learning: open educational resources, open pedagogy and open leadership.

Open Learning Characteristics:



The primary goal of the OC@ADLC was to create accredited open online projects. The first accredited MOOC for High School students was called Beyond Facebook, or #BEFA12 and was offered in October 2012. Students could receive COM1255 Alberta Career and Technology Studies High School credit for completing the course. The course content and topic was developed by asking high school students in focus groups what they would like to learn in an open online environment. The students suggested that they wanted to learn in groups, maybe in blogs, about anything other than Facebook. The participants included 21 volunteer facilitators from around the world and seven Albertan students. Over three days, in the Canvas Instructure LMS, in groups with people they did not know, students were asked to create a blog, open it to the world and track its progress by using social media. Students were given asynchronous and synchronous opportunities to interact, including twitter chats, LMS discussions and videoconferencing. All the students who took the course were taking their first online course.

The students were assessed based on Alberta Education's proposed *Framework for Student Learning* competencies. The students were also offered open badges based on specific criteria, in the hopes that ADLC would create an open badge system.

Although there were only seven student participants in the MOOC, at one point a student posted a video with what would generally be perceived as private content on his/her blog, but which could

be viewed by others. Experimenting with “all open” learning meant that the student did not have the support he/she needed to think about the implications of that video. Due to the sensitive nature of the video, no details of its content are being provided within the context of this brief issue paper. Although the facilitators were able to connect with the student, the principal and the parents within the hour, the posted video was one of the biggest learning experiences for everyone involved, for two main reasons:

- The student needed support and wanted to be heard. If he/she had not had a voice in a course facilitated by teachers, he/she would have still created the video, but would not have received the same level of support. The student received immediate support and feedback and simultaneously experienced authentic learning stemming from the potential negative consequences of establishing a publicly accessible digital identity.
- High school students may benefit from extra immediate support when they are involved in illegal or potentially unlawful situations and/or their physical safety or psychological well-being are threatened. Having a facilitator with whom high school students already have a positive relationship provides a supportive safety mechanism for the student. The findings from #BEFA12 promoted positive online student experiences with teachers in an open and connected learning environment. #BEFA12 reinforced the importance of managing relationships and understanding the risks that may accompany establishing trust and personal connections in learning environments.

Blended Open Learning

Bryan Jackson, an educator in the Coquitlam, BC School District, also initiated open pilots in 2012, though within a blended learning frameworks. Jackson offers a Philosophy 12 International Baccalaureate course in a face-to-face environment, which he opened to the world during the 2011–2012 Fall semester by creating a course blog that was open to public feedback and interaction. Students were able to post their course projects and reflections on the course blog and the public was encouraged to comment and give feedback. The Philosophy 12 course initiated participation from international educators and the students participated in a Google hangout for the Educational Technology and Media MOOC for educators to describe their open learning experience. In the hangout, the students promoted the authentic learning experience, their ability to use social media in engaging ways in their course projects and their appreciation of the feedback from open participants. The course was offered for one semester.

Similarly, Jackson also launched a high school guitar course open to all. Using a blog platform, he created an interactive course based on basic skills and presentation. Like in Philosophy 12, his course had international participation from all ages. Bryan suggests that open learning encourages and develops a supportive and empathetic community. He suggests that open learning, “...can provide students with an environment where they might become the innovators and inventors of themselves and their own worlds, breathe life into their own ideas and figure out how to take their communities beyond the sum of their individual parts” (Jackson, 2012).

MOOCs for K–12 Educators

One of the first MOOCs for K–12 online educators was called the “Virtual Schooling MOOC,” offered by Dr. Michael Barbour and colleagues. The six-week course, delivered in September 2012, offered an excellent collection of K–12 online learning resources.

In November 2012, Dr. Valerie Irvine developed and facilitated an open workshop called “Moving Educational Traditions for Open Practices” for the Community of Expertise in Educational Technology (CEET). Dr. Irvine initiated the conversation about “how and why” to practice in the open, especially in BC and established a K–12 open hashtag in Twitter known as #ceetopen.

In January 2013, Dr. Alec Couros led a team of open collaborators through a MOOC called “#ETMOOC - Educational Technology and Media.” The course was designed as a cMOOC, but not affiliated with any university or institution. The three-month course developed into a community. There was no set assessment and K–12 educators participated for the sake of learning together.

In February 2013, Verena Roberts extended Dr. Irvine and Dr. Couros’s work by developing and offering a CEET open course using Google communities and Wikispaces as a platform. Using the research and findings from her experiences as an open learner and educator, the one week course was offered and included social media, Twitter integration, Google communities, open educational resources and was designed around the open classroom model. The course started with 100 participants and has grown to over 800. Dr. Irvine, Dr. Couros and Verena Roberts were able to demonstrate that an online course can transition into open online communities that are sustained by the communities’ participants.

Students as Teachers

The final OC@ADLC pilot was a high school MOOC facilitated and developed by high school students. Verena worked with Don Wettrick, a high school Broadcasting and Innovations Class teacher from Franklin High School, Indiana to support his students in leading a two week course called #StuHackEd. The two-week course was based on video creation. In the first week the students learned how to create a video online. During the second week, Wettrick asked participants to create a video about what they can teach the world. The course was delivered using Wikispaces and a Google Community. Although there was not a huge number of student participants, this course had global participation and has encouraged extensions and new projects in Australia, Israel and Kelowna, BC. Students and educators learned together through dialogue in the Google Community.

Current MOOCification in K–12

There is current replication and extension of many of the open online experiments. Bryan Jackson has started a new year teaching Philosophy 12. A new startup company called iDesignEDU is working with Verena Roberts to create a high school MOOC for UT Tyler in Anatomy and Physiology, which will be offered as a dual credit option for students. The rationale for the MOOC is to offer an online transition course that generally has high withdrawal rates in college. The goal is to change the pattern of incompleteness and to create support for students before they get into college.

A collaboration of Alberta school districts will offer an accredited high school open online course in Leadership in October 2013. An addition to the open online course will be a competency-based Mozilla Open Badge option for students, in an attempt to blend formal and informal assessment in their learning portfolios.

Finally, Carolyn Durley in Kelowna, BC is developing MOOCon24—a twenty four hour open conference facilitated by hourly student led cohorts from around the world. Her previous open learning programmes include innovative flipped learning opportunities for high school science classrooms.

Open learners include students, parents, educators and administrators. By encouraging everyone to learn from and with each other, we are able to create a more supportive and empathetic learning community. Open learning is a risk because of its transparency and our natural aversion to failure as humans. The emphasis is not on a finished product in open learning, but on watching and learning through process – in an open way. The open learners throughout these examples took a chance and demonstrated their self-awareness by searching for supportive collaboration, building trust and developing relationships. The learners expressed appreciation for having the opportunity to learn about what they were passionate about through an emphasis on self-directed learning and personal learning connections. Open learning provides an authentic way for learners to experience how to influence and have a voice in their own learning. This is demonstrated through the wide variety of options presented in this paper.

References

- Bowen, P. (1987). Open learning formats in high performance training. *Open Learning: The Journal of Open, Distance and e-Learning*, 2(2), 29–31
- Chang, B. (2010). Culture as a tool: facilitating knowledge construction in the context of a learning community. *International Journal of Lifelong Education*, 29(6) 705–722.
- Coffey, J. (1988). Guest editorial: The opening learning movement. *Innovations in Education & Training International*, 25(3), 195–196.

- Couros, A. (2013) Topic #4: The open movement – Open access, OERs & future of education. #ETMOOC *Massive Open Online Course Educational Technology and Media*. Retrieved from <http://etmooc.org/blog/2013/03/02/topic-4-the-open-movement-open-access-oers-future-of-education/>
- D'Antoni, S. (2009). Open educational resources: Reviewing initiatives and issues. *Open Learning: The Journal of Open, Distance and e-Learning*, 24(1), 4.
- Ehlers, U.-D. (2013). *Open learning cultures: A guide to quality, evaluation, and assessment for future learning*. Heidelberg: Springer Verlag.
- Jackson, B. (2012). My guitar class is more than a class. *CEA blog*. Retrieved from <http://www.cea-ace.ca/blog/bryan-jackson/2012/12/4/my-guitar-class-more-class>
- Mason, R. (1991). Open learning in the 1990s, *Open Learning: The Journal of Open, Distance and e-Learning*, 6(1), 49–50.
- Roberts, V. (2013) Moocifying k12: Relationships, collaboration, risk taking. *Hybrid Pedagogy*. Retrieved from http://www.hybridpedagogy.com/Journal/files/MOOCifying_K-12.html
- Siemens, George. (2012) What is the theory that underpins our moocs? *elearnspace*. Retrieved from <http://www.elearnspace.org/blog/2012/06/03/what-is-the-theory-that-underpins-our-moocs/>
- Watters, A. (2012) Top ed-tech trends of 2012: MOOCs. *Hack Education* Retrieved from <http://www.hackeducation.com/2012/12/03/top-ed-tech-trends-of-2012-moocs/>
- Wiley, D. (2009). Defining “open”. *Iterating Toward Openness*. Retrieved from <http://opencontent.org/blog/archives/1123>
- Wilson, V., Schlapp, U., & Davidson, J. (2003). Prescription for learning? Meeting the development needs of the pharmacy profession. *International Journal of Lifelong Education*, 22(4), 380–395.



3.3 BC Teachers' Federation Research on the Work of Distributed Learning Teacher

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Director of Research and Technology
BC Teachers' Federation

The policy context for Distributed Learning (DL) in British Columbia shifts and weaves nearly as frequently as the technology that is central to its form of educational practice. Those who teach in the programmes are buffeted by this constantly changing policy terrain.

The research carried out by the BC Teachers' Federation (BCTF) Research Department on DL has focused on understanding the shifting environment in which a group of its members work. The intention is to find ways to improve the conditions of their work and their ability to provide quality education for DL students.

A look at any educational service in BC also has to take into account the reality of funding. For more than a decade, school districts have lived with funding that has grown much more slowly than rising costs. This results in funding taking priority over many other educational considerations.

DL in BC Operates on a Competitive Model in a Race for Funding

Until the beginning of the 2000s, enrolment in DL programmes had been capped at 2,200 students province-wide and was limited to 18 school district programmes. A new government lifted the limits and told every school district they could develop a programme—and nearly every one did just that. Enrolment in DL ballooned and by 2012–13 about 80,000 students were taking at least one course, although numbers seem to have reached a plateau.

Only a handful of the smallest districts did not get into the race. In the climate of more and more restricted funding, everyone was afraid of losing students and funds to a programme operated by another district.

This growth in programmes and students took place with inadequate standards or guidelines about what makes a good DL programme. What are good online pedagogical practices? How do you determine whether this is the right programme for a student? How can resources be developed collegially and shared among teachers?

In the mid-2000s, the BC Ministry of Education did adopt a statement of quality standards and a process for non-punitive assessment using the standards. However, the real driver of Distributed Learning is the funding it brings to school districts and the “compliance audits” by Ministry auditors.

The random growth of programmes has led to many different forms of organization. Most are primarily asynchronous and some primarily serve students in the district where the student lives and include face-to-face (F-2-F) and group elements. Others encourage enrolment from anywhere in the province. Some have a fixed time for completing a course within a year, others allow extended times. Some have a teacher teaching only a single subject, others have a teacher teaching many different courses at different levels.

Auditors have trouble with this kind of diversity. They need some concrete standards to be able to go through on a checklist—yes/no; completed/not completed. So in the absence of standards built on a pedagogical basis, the financial auditors' checklist becomes the reality around which programmes are built.

DL schools actually spend time going through practice audits to make sure all the pieces are together if they happen to get audited that year (audits only cover some programmes in any particular year). The costs are real if the school does not meet the audit. Funds are taken away—funds that are already committed and spent by the school district—if the auditors find a student who has not met the checklist of criteria for funding him/her. An audit funding grab means that some other programmes have to be reduced if the school district budget is to be balanced at year end.

The provincial funding policies change frequently as well. In 2011–12 the Government funded each DL student at the same rate as a student in a face-to-face course. Then in 2012–13, the Government froze per student DL funding while F-2-F per student funding increased.

Funding and audits drive DL school administrators' decision-making process and are the focus of too much of what should be professional discussion about pedagogy and student success.

DL Teachers are Particularly Vulnerable

DL teachers lack a number of supports and definitions of working conditions that exist for teachers in traditional face-to-face programmes.

The BC School Act legislation that defined class size limits of 30 students explicitly excluded Distributed Learning.

Continual funding shortages create pressure to increase the number of students assigned to teachers—the flexibility regarding student enrolment makes DL a “cash cow” with funding identified for DL students being allocated elsewhere in the system.

School districts offering a DL programme are required in their contracts to provide training and professional development for those teachers teaching their online courses. This requirement is too seldom observed.

Not nearly enough professional development specific to online pedagogical practice is available. The BCTF specialist association, Educators for Distributed Learning, does offer one-day workshops to local DL schools and at PD conferences. They also have a mentoring programme for new online teachers.

The teachers' collective agreement applies to DL teachers, but does not address some of the conditions of work that are different for DL teachers. DL teachers at times feel marginalized within the profession because of lack of collegial understanding of the work they do and perceptions of its being an easier job than facing kids in a classroom.

School administrators may be assigned to DL programmes with no background experience in DL and, in some cases, are seen by teachers as not understanding the work of DL teachers. With little framework for determining working conditions on an equitable basis, favoritism and inequities develop.

Research as Part of a Process of Change and Improvement

The policy of the BCTF adopted at an Annual General Meeting in 2001 affirmed "that Distributed Learning remains a positive offering within the BC public school system when fully supported by adequate staffing, funding and resources within provincial guidelines."

The BCTF DL research projects have been carried out in the spirit of this policy—exploring and making visible issues in the education of students in a primarily online environment and describing the working conditions of those who teach in this environment.

The hope is that clarity about the issues can be an impetus to developing policies that better serve teachers and their students.

BCTF Research Reports on DL are available at:

<http://www.bctf.ca/publications.aspx?id=5630#Technology>



3.4 Putting Theory into Practice: Flexible Learning and Course Development at VirtualHighSchool.com

Nicki Darbyson
Virtual High School

Virtual High School (VHS), located in Bayfield Ontario, currently offers over 70 online courses to students all over the world. The courses are created and revised to reflect the latest research on learning and curriculum design; some of the courses are in their 18th iteration in order to stay current and to accommodate these changes. This constant renewal is certainly one of the challenges (and rewards) of creating online courses. However, because we are a fully online private high school, we can design our lessons based on what we know about the learning process and based on Ministry guidelines, rather than on the learning process often practised in bricks and mortar classrooms.

Theory: so what do we know about learning?

The literature on theories of learning has been revived in the last decade as online learning, simulations and video and computer games have become mainstream. Scholars have seized the opportunity to re-examine how learning occurs—especially for “digital natives,” students who have grown up in the digital age (Prensky 2001, 2006). In 2001, James Paul Gee (2001) pointed out that students learn best when they are fully immersed in a given activity—whether it be reading a good book, completing a personal research project, or even playing a game. If students are immersed in an activity, they are more likely to engage in the learning process. For example, in the multiplayer online game America’s Army, students engage in role-play scenarios in which they are responsible for making the same decisions that soldiers make in situations of conflict. They interact with generals, as well as the nations’ leaders. A study conducted on the game found that more than half of the participants had learned mediation skills and leadership skills, such as reducing hostilities in groups and resolving conflicts (Belanich, 2004). These games allow students to relive historical or present-day situations and conflicts in different settings and conditions, teaching students second order concepts like historical context, empathy and cause and effect relationships. The collaborative element to these games is also effective for sharing and learning various strategies and such cooperation helps to sustain motivation (Iacovides, 2012). Rosemary Garris writes that “motivation is a key aspect of effective learning but that motivation needs to be sustained through feedback responses, reflection and active involvement in order for designed learning to take place (Garris et al., 2002). Therefore, the key challenge for effective instruction and course development is for the students to be engaged, motivated, supported and interested: ideally, they are motivated to reflect on what they are learning and to apply their findings to real-world contexts.

Practice: Virtual High School and Course Development

Virtual High School's Philosophy of Education

Taking the latest research into account, Virtual High School makes every attempt to design courses that offer students flexibility, multiple instructional methods, immersive activities and engaging content. When students register for a course with VHS, they are able to start that day and have 18 months to earn their credit. This flexibility offers students the chance to work at their own pace; they can quickly move through concepts that come easily to them and take their time with ideas that are more difficult. Extended learning activities (additional reading, videos and games) are placed throughout the course to give students extra support where needed and they provide varied instructional methods for students so they can choose the options that work best for them. As the research shows, learning is an individual process. Students need to be fully engaged in activities to retain what they learn; this comes naturally when students can follow their own timelines. Learning happens where and when students work best.

Growing Success: The Ontario Ministry of Education and Assessment and Evaluation

VHS follows the Ontario Ministry of Education's curriculum and adheres to the provincial assessment and evaluation policy as outlined in their document, *Growing Success* (2010). In this document, the Ministry explains that students should receive regular coaching from their teachers and have numerous opportunities to receive feedback while they learn, practise and fine-tune a skill. They should be evaluated on a skill only after they have learned and applied it in various practice assessments (known as assessment FOR learning activities). Students are also given the opportunity to reflect on their own learning and to assess their peers in assessment as learning activities. The Ministry refers to the graded evaluation of the student's "product" as assessment of learning.

Building Engaging courses: A Case Study of CHC2D: Canadian History since WWI

Using *Growing Success*, VHS begins its course development with "the end in mind." The Ministry provides overall expectations for each course. These expectations outline the skills that students should grasp before they complete the course. VHS curriculum writers use these goals to design activities and assessments that provide building blocks for the development of specific skills. For example, before students complete CHC2D: Canadian History since WWI, they are expected to have used "the historical inquiry process and the concepts of historical thinking when investigating aspects of Canadian history since 1914" (The Ontario Curriculum, 2013). To meet this overall expectation, students are asked to analyse a primary source document and explain the document's greater historical significance. Students need to be able to determine the following: the author of the document, the author's motivations for creating it, their position in society and their biases. Students would also need to understand the concepts of historical thinking, and in considering historical significance, empathy and cause and effect. To help students learn the historical inquiry process, they

are introduced to specific concepts of historical thinking with text and video, for example through using interactive matching games and questions with clickable drop-down answers that students pair the provided examples with the right historical concepts. Once they make assumptions about the correct answers themselves, a sample teacher answer is revealed.

Next, the course writer looks at the assignment's required skills and breaks them down into manageable activities that allow students to practise individual skills. These activities are submitted only for feedback, not a grade. Knowing that students learn best when they are fully engaged and motivated to arrive at the best answer, VHS gives students considerable choice in the subject of their inquiry. For example, for the assignment above, students would be able to pick their own topic and find a primary source document that is of interest to them. The first practice activity asks them to identify the author and explain how they know their position in society and their biases, using the document alone. This activity is submitted to their teacher for feedback so they can work on specific skills for their next attempt. Having choice empowers the learners; they are able to develop questions that are meaningful to them and engage in the inquiry process with material that is relevant to their lives. Once they have received feedback on their final product, students are asked to reflect on their feedback and their learning experience in general in their ePortfolio, an online collection of their work that can be used to demonstrate their learning. This provides students with the opportunity to identify their strengths and weaknesses, set new learning goals and reflect on how they learn best.

Finally, VHS uses every opportunity to use games and immersive worlds in its course development to engage the "digital natives" that register. Research shows that young learners today "require multiple streams of information, prefer inductive reasoning, want frequent and quick interactions with content and have exceptional visual literacy skills" (Van Eck, 2006). We also know that games can be used to motivate learners, especially students with low literacy or language levels. Such students also often learn well in role-play situations. For example, in CHC2D students are asked to determine the causes of WWI by role-playing the ruler of Germany, Kaiser Wilhelm II, in a history simulation provided by the Active History group¹. The decisions they make have predetermined consequences so students can see examples of how cause and effect works in history. They can also compare their decisions with the ones Kaiser Wilhelm made in 1914.

Students are also engaged in role-play activities that give them exposure to potential careers. The culminating assignment for CHC2D asks students to role-play a museum curator and design an exhibit on a topic of their choice. They are required to tell a story using images of artifacts that they have researched and selected themselves and to provide brief object descriptions that explain how each artifact is important to the larger story. This exercise allows students to build a historical narrative, select appropriate evidence, justify the artifact's historical significance and place it in the appropriate historical context—all of which are requirements of the Ministry of Education's overall expectations for the course.

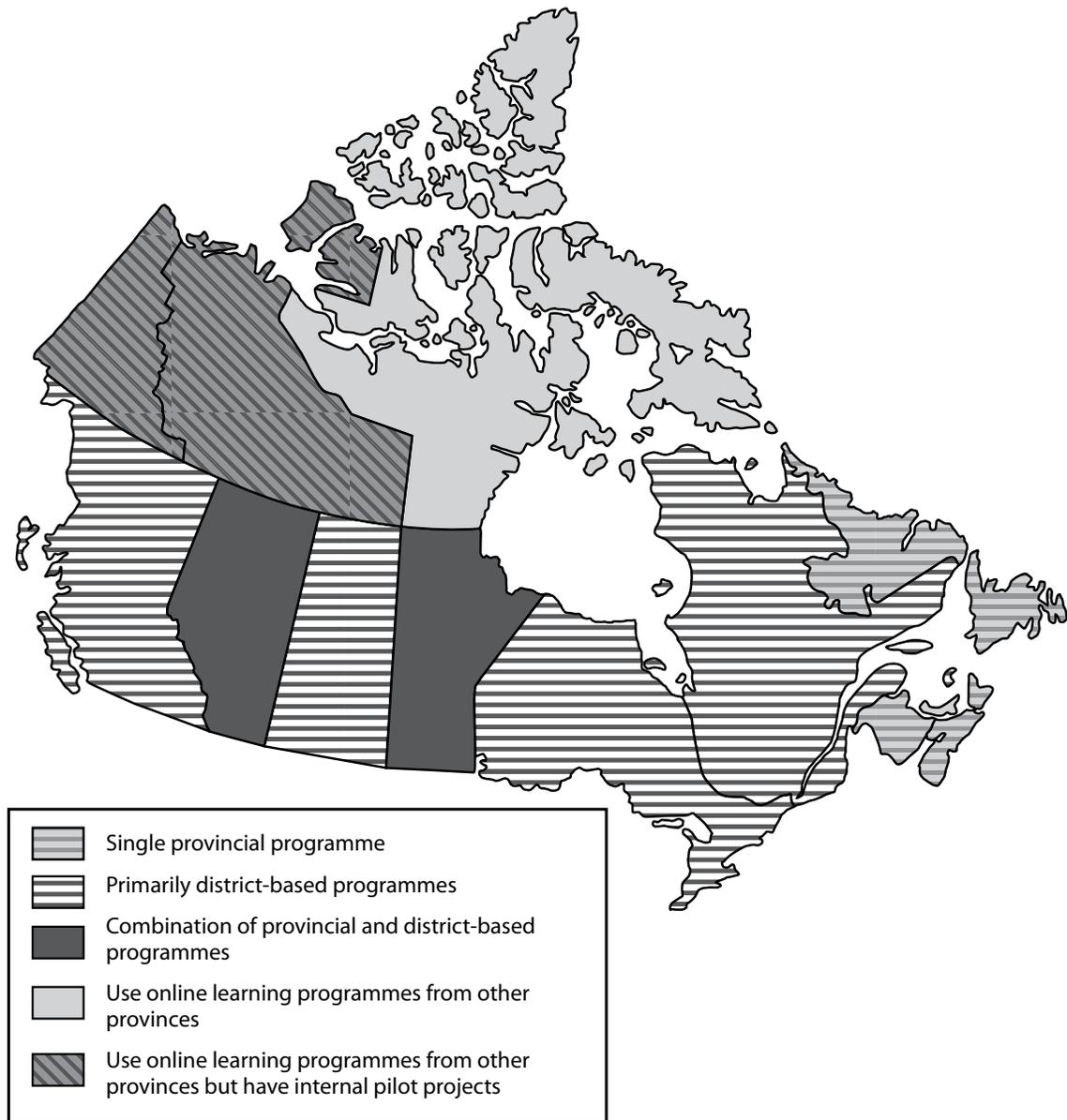
¹ Activehistory.ca is a website that connects the work of historians with the wider public and the importance of the past to current events. The game can be accessed at http://www.activehistory.co.uk/WW1_CAUSES/ENGLISH/frameset.htm

Based on what we know about learning—and VHS’s experience in the course-development process—the most important aspect of course development is designing engaging content that will motivate and inspire the student. Course writers at VHS make every attempt to infuse the courses with creative instruction, variety, choice and flexibility. Students need to be inspired by interesting approaches and need to have the flexibility to run with ideas in their own way. As the Canadian Council on Learning (2009) stated in its report, *State of e-Learning in Canada*, “delivery of resources does not guarantee learning, even when the initial barriers of access have been overcome.” Students must be interested and immersed in the material—and that is what makes writing online courses such a challenging and rewarding experience for educators.

References

- Belanich, James, Sibley, D and Orvis, K. (2004) *Instructional characteristics and motivational features of a PC-based game*. [Research report no. 1822]. Alexandria, VA. US Army Research Institute for Behavioural and Social Sciences.
- Canadian Council on Learning. (2009). *State of e-learning in Canada*. Ottawa, ON: Author.
- Garris, Rosemary, Ahlers, R., & Driskell, J (2002). Games, motivation, and learning: A research and practice model. *Simulation and Gaming*, 33, 441–467.
- Gee, J.P. (2003). *What videogames have to teach us about learning and literacy*. New York. Palgrave MacMillan.
- Iacovides, Ioanna (2012). *Digital games: motivation, engagement and informal learning*. PhD thesis, The Open University.
- Ontario Ministry of Education. (2013) *The Ontario Curriculum, grades 9 and 10: Canadian and World Studies*. www.ontario.ca/edu.
- Ontario Ministry of Education. (2010). *Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools, first edition, covering grades 1 to 12*.
- Prensky, Mark. (2001). *Digital game-based learning*. New York and London: McGraw-Hill.
- Prensky, Mark. (2006). *Don't bother me mom, I'm learning*. St. Paul, MN. Paragon House.
- Van Eck, Richard. (2006). Digital Game-Based Learning: It's not just the digital natives who are restless. *Educause*. March/April.

4. National Overview



At present, students from all thirteen provinces and territories participate in K–12 distance education. This is not to say that all thirteen jurisdictions have K–12 distance education in operation, as there are no programmes in Prince Edward Island or Nunavut. The Canadian landscape of K–12 distance education has not change significantly in the past year. The highest level of activity continues to be in British Columbia, where there is a substantial number of district-based and regional-based public programmes, along with a significant number of independent or private programmes. Alberta also continues to have a higher than average level of participation in K–12 distance education, with its province-wide and district-based programmes. Similarly, Manitoba continues to have both province-wide and district-based programmes and continues to a level of K–12 distance education participation at the national average.

Quebec is the only other province to maintain both province-wide and district-based programmes, while Ontario and Saskatchewan continue to have arrangements similar to British Columbia (i.e., where the majority of programmes are district-based). It should be noted that the high level of cooperation between the district-based distance education programmes in both these provinces continues. Over the past year, the joint planning of course offerings and integration of shared initiatives has even increased. The only jurisdictions that continue to maintain single province-wide systems are Newfoundland and Labrador, New Brunswick and Nova Scotia. Finally, the Yukon and the Northwest Territories continue to rely on distance education programmes in other provinces, although both also have internal distance education initiatives that have grown significantly in the past year.

The total K–12 population in Canada for 2012–13 was approximately 5.3 million students. Based on actual and estimated enrollment data, the number of student engaged in K–12 distance education was 284,963.

Table 3. Summary of the K–12 distance education regulation by province and territory

Province/Territory	# of K–12 students	# enrolled in distance education	Percent involvement
NL	67,604	1,232	1.8%
NS	128,131	~2,550	2.0%
PE	20,406	62	0.3%
NB	101,079	~2,250	2.2%
QC	1,306,848	39,618	3.0%
ON	2,051,865	76,337	3.7%
MB	195,152	11,351	5.8%
SK	169,939	~8,000*	4.7%
AB	616,375	63,238	10.3%
BC	638,835	78,168	12.2%
YT	5,122	74	1.4%
NT	8,300	267	3.2%
NU	9,074	11	0.1%
Federal	138,400	1,805	0.1%
Total	5,456,800	284,963	5.2%

* The Saskatchewan Ministry of Education provided the figure of 2,611 students. However, based on five responses from the individual programme survey there were at least 5,665 students.

There continues to be a great degree of variability in the level of K–12 distance education participation. For example, the proportion of students engaged in K–12 distance education increased in the provinces of Ontario and Manitoba, while it decreased in the province of Alberta

and the Northwest Territories. Overall, there was a 15% increase in the number of K–12 students engaged in distance education in 2012–13 (or an increase of approximately 35,000 students).

Beyond the level of K–12 distance education activity in each province and territory, there continues to be a wide range of variability in the source and nature of regulation in K–12 distance education across Canada.

Table 4. Summary of the K–12 distance education regulation by province and territory

Province/ Territory	Type of Regulation	Nature of Regulation
NL	None	
NS	Collective agreement	Provisions related to workload, professional development and quality of life issues
PEI	Ministerial directive	Guidelines for the use of distance education
NB	Policy handbook	Outlines responsibilities for distance education stakeholders at all levels
QC	None	
ON	Ministerial contracts and policy handbook	District school boards agree to follow the policies outlined in the <i>Provincial E-Learning Strategy</i>
MB	Legislation and policy handbook	<ul style="list-style-type: none"> • Minister of Education can approve distance education • Regulations are related to the use of the Ministry distance education options
SK	None	
AB	Legislation and policy handbook	<ul style="list-style-type: none"> • Minister of Education can make regulations related to distance education • Regulations primarily focus on amount of instructional time
BC	Legislation and Ministerial contracts	Substantial regulations related to funding, quality and almost all other aspects of the delivery of distributed learning
YT	Legislation and memorandums of understanding	<ul style="list-style-type: none"> • Minister of Education can approve distance education and charge student fees for such courses • Individual agreements are between the territorial government and individual distance learning providers
NT	Legislation, policy handbook and memorandums of understanding	<ul style="list-style-type: none"> • Allows education authorities to create or engage in distance education programmes • Provides series of requirements for distance education programmes • Individual agreements are between the territorial government and individual distance learning providers
NU	Legislation and memorandums of understanding	<ul style="list-style-type: none"> • Defines what constitutes distance education • Individual agreements are between the territorial government and individual distance learning providers
Federal	Contracts	Agreements between some of the individual FNMI distance learning programs

Many provinces and territories continue to have some reference to distance education in the *Education Act* or *Schools Act*. In most instances the reference simply defines distance education or gives the Minister of Education in that province or territory the ability to create, approve or regulate K–12 distance education. In many of the jurisdictions where this occurs there are no additional regulations.

Another trend is the use of contracts or policy handbooks to regulate K–12 distance education. In most instances, these handbooks are in jurisdictions where schools participate in some form of province-wide programme. The handbook outlines the requirements for participation.

Finally, the two exceptions to these general trends continue to be Nova Scotia and British Columbia. As was discussed in the 2012 *State of the Nation: K–12 Online Learning in Canada* report, in Nova Scotia the main regulation of distance education can be found in the collective agreement signed between the Government of Nova Scotia and the Nova Scotia Teachers Union. Similarly, British Columbia continues to have the highest level of regulation for K–12 distance education, featuring a system that allows students to freely choose any distance education option and a funding model where the funding follows that student's choice. Various aspects of the British Columbia regulatory system have been the focus of brief issue papers in the 2010 and 2012 editions of the *State of the Nation: K–12 Online Learning in Canada* report.



4.1 Newfoundland and Labrador (NL)

Pop: 526,702
K–12 Schools: 268
K–12 Students: 67,604

of K–12 DE Programmes: 1
of K–12 DE Students: 1,232

K–12 distance education was introduced to the Province of Newfoundland and Labrador in 1988–89, with the delivery of a single advanced mathematics course using a telematics or audiographics delivery system. This programme began to be phased out in 2000–01. A Ministerial Panel recommended the creation of the Centre for Distance Learning and Innovation (CDLI). The CDLI utilized a Web-based model of distance education that had developed from the traditional distance education programme, as well as several district-based initiatives.

Distance Programmes

The CDLI is the sole provider of K–12 distance education in the province. During the 2012–13 school year, 1,232 students accounted for 2,064 course registrations in 40 different courses—including six courses delivered in French to the province’s French-first language students.

In the fall of 2012 the CDLI offered online course review for five public exam courses for students availing of supplementary examinations. These online course reviews for public exam courses were offered again in spring 2012 for students taking public examinations.

Governance and Regulation

At present, the CDLI operates within the Primary, Elementary and Secondary Branch of the Ministry of Education. It receives a block funding allocation from the provincial Government that funds the administration, all teacher and staff salaries, course development activities, Internet/network connectivity costs for 110 schools, K–12 technology integration and some provision learning for the provincial K–12 school system. The CDLI also purchases and deploys all hardware and software required for the delivery of its online learning programme, including

all required computer equipment, videoconferencing equipment and other learning resources that enhance the distance learning experience.

At this time there is no language in the *Education Act* related to K–12 distance education. There are also no policies or regulation specifically related to K–12 distance education within the Ministry of Education beyond those utilized by the CDLI itself. The Ministry of Education continues to track the method of delivery that students complete their studies and these data are available through the *K–12 School Profile System*.

Vignette: Technology Education through CDLI

“Okay guys so I’ve shown you how to do it. Now it’s your turn. See if you can finish off your drawings and get them in the portfolio before class on Friday. Work on them for the rest of class. I’m here to help so raise your hand or text me if you need it.” With that Tim Goodyear, CDLI’s Tech. Ed. Instructor, clicks the “Talk” button in his *Blackboard Collaborate* room to mute his microphone and turns his eyes to the smaller renditions of the students’ desktops tiled across two of his four monitors. He sends private messages to two students he sees from his remote console their focus is not on the task at hand, before taking a look at the recently-arrived course email.

“Students expect quick replies,” he says, “and I do the best I can to keep up, but it can be hard sometimes as I have students in three different courses and spread across two time zones.” There’s a lot of equipment in Tim’s room. Besides the aforementioned 4-monitor PC, there’s also a Videoconference Unit with a 42” monitor, assorted power tools and a heavy cube, approximately 1 m by 1 m by 1 m, encased in safety glass. “That’s a computer Numerical Controlled (CNC) router, same as the one we have installed at each of the student sites,” explains Tim. “In this course, Design and Fabrication, the students will follow a design process in which they will go from spotting a need, proposing a solution, then building, testing and subsequently refining and evaluating the solution. The CNC Router is the machine they will ultimately use to construct the working solution. Right now they are at the proposal stage, completing 2D drawings of the solution. Later we’ll move to 3D and then fabricate it.”

Tim keeps a constant eye on the class. He has many things to watch. His *Blackboard Collaborate* room is open all the time class is running and all students stay logged in even when they are doing other tasks such as preparing materials, drawing using 2D or 3D software and updating their design portfolios. When they have questions, most simply choose to message Tim, who responds privately, but some do just key their mikes and ask out-loud. During this particular session a pair of students called in to Tim’s videoconference unit as they had a question about a part they were fabricating and needed to show the trouble spot to Tim for advice. Because of the Videoconference bridge, Tim has eyes in all of the classrooms any time he wants. When it’s time for periodic presentations, Tim gets all of the students to dial in and whoever has been selected to present at that time. Today, the Videoconference is not used much; it varies with the tasks.

Tim keeps a constant eye at the two rightmost monitors. The ones at the left display the *Blackboard Collaborate* room and the *Desire2Learn* room, respectively. The ones on the right, though, are devoted to showing the students' desktops. Not only does this ensure that Tim has a means of ensuring that the students are all on task, but it also helps him spot trouble, when necessary. From time to time Tim does need to offer direct assistance with students who experience particular difficulties. One student didn't quite get the instructions on how to render back the drawing so Tim opened up a Bomgar remote access session with the student. Using the application Tim can take the student step by step through the process, even taking control when necessary. "With the Bomgar I can work directly with any student's computer right here from my desktop. It's the same as if I was sitting beside every student whenever that's needed. I can even shut off the CNC device in their school from right here in my office if I need to," says Tim.

I turn back to Tim to ask another question but discover that he has put his headset back on and has gathered the whole class back to his *Blackboard Collaborate* room. He's finishing off today's session, debriefing the students and reminding them what needs to happen before the next class. I can see the Goodbye messages scrolling up the text window as the students sign off. They're not just directed at Tim. His class is as big as the province.



4.2 Nova Scotia (NS)

Pop: 940,789

K–12 Schools: 407

K–12 Students: 122,643

of K–12 DE Programmes: 2

of K–12 DE Students: ~2,550

The roots of K–12 distance education in Nova Scotia began in 1920 with the introduction of a correspondence study program (CSP). While this model of delivery continues to exist, the province has also seen the use of an educational television programme that began in the 1960s. In the past decade, the province saw the introduction of district-based online programmes that have evolved into a single, province-wide online programme – the Nova Scotia Virtual School (NSVS).

Distance Programmes

The NSVS is one of two providers of K–12 distance education in the province. During the 2012–13 school year, approximately 800 students were enrolled in online courses through the NSVS from the eight English-speaking school boards and the *Conseil scolaire acadien provincial*. The other K–12 distance education programme is CPS, which the Ministry continues to transition to an online delivery format. At present there are approximately 1,750 students enrolled in courses through the CSP—approximately half these students are also attending a public school, while the other half are adult students or live outside of the province.

Governance and Regulation

The Learning Resources and Technology Services division of the Public Schools Branch of the Department of Education manages distance education programmes in Nova Scotia.

The provision of distance education continues to be governed by the 11 provisions included in the agreement between the government of Nova Scotia and the Nova Scotia Teachers Union. As a contract between the government and teachers' union, most of the provisions deal with teacher certification and quality of life issues. For example, there are provisions related to defining the work day, professional development requirements, programme oversight, class size and the management of the distance programmes.

Vignette: Pugwash District High School

All senior high students at Pugwash District High School are required to take a minimum of four credits per semester; graduating with 24 credits versus the required 18 credits. This policy is in place based on the theory, 'free education is a good thing.' Although we work very hard to maintain this policy, it is a fact rural schools typically have lower student populations than urban-based schools. A lower student population obviously means fewer teachers, making it difficult to provide senior high students with the diversified course selection they deserve.

This is why the Nova Scotia Virtual School (NSVS) is so critical to our schools' programming. Today's students must be prepared for work in a global economy and NSVS courses help to do just that. Our students work on their online courses independently, in a technology-rich educational environment during the school day. Although students are working independently, they have access to their online teacher via video-conferencing, face-to-face visits during teacher office hours and/or e-mail. Virtual courses are a true test of a students' ability to be successful in a post-secondary setting, as they require students to be independent critical thinkers and problem-solvers. NSVS courses are structured for daily activity and can be very demanding. Our students must successfully complete an application process before they are registered in an online course in an effort to select the candidates who are best suited to online learning.



Students taking an NSVS course are sometimes able to complete required tasks prior to due dates, either in school and/or at home. If students demonstrate they are able to maintain a solid academic standing in all courses, they are permitted to take a Co-op course; this way they have an opportunity to receive five credits in a semester. This opportunity is another method to diversify their high school experience, which can help students make better post-secondary decisions. In conclusion, with NSVS courses offered at our school we are able to provide 43 courses this semester—not bad for a little rural school of 126 senior high students in Pugwash, Nova Scotia!



4.3 Prince Edward Island (PE)

Pop: 145,237

K–12 Schools: 63

K–12 Students: 20,406

of K–12 DE Programmes: 0

of K–12 DE Students: 62

Historically, Prince Edward Island had maintained its own K–12 distance education programme using a video conferencing system. Over the past decade, use of this programme decreased significantly. In fact, since the beginning of this study in 2008 the video conferencing system was used solely for the purpose of French-language courses. The 2010–11 school year was the final year that this system was within Prince Edward Island.

Distance Programmes

At present, there are no K–12 distance education programmes in Prince Edward Island. Through an inter-provincial agreement, students in Prince Edward Island have the ability to access online courses offered by the distance education programme offered by the New Brunswick Department of Education and Early Childhood Development. During the 2012–13 school year there were 16 French first language students and 46 English language students enrolled in online courses through this programme.

Governance and Regulation

Internal regulation continues to be driven by Ministerial Directives No. MD 2001–05 and No. MD 2008–05, which apply to courses delivered during the regular school day; broadly define distance education; and outline a series of beliefs about the nature of distance education instruction. Further, individual schools and districts that participate in distance education programmes must adhere to guidelines found in the provincial *Roles and Responsibilities for Distance Education* document.

Vignette: Souris Regional High School

Souris Regional High School is a grade 8–12 school with a current enrolment of approximately 250 students. With the support of the Prince Edward Island Department of Education and Early Childhood Development, the school has been offering distance education for a number of years. The courses are delivered in an asynchronous environment in partnership with New Brunswick Department of Education and Early Childhood Development. Students are selected as candidates for distance education based on the following policy:

Grade 12 students will be considered for Distance Education based on a number of factors: academic performance, student timetable, graduation requirements, and suitability.

Making an appropriate pairing of student abilities and interests to a distance education course is the key to success. Over the years, our students have enrolled in a variety of courses, but have the greatest success with courses in the areas of Writing and Social Studies. One of the requirements in making a course selection for a student is determining if the course has received approval and an equivalency from the PEI DEECD. For example, “World Issues 120” is the New Brunswick equivalent of Geography 621A. As such, the completed credit appears on the student’s transcript as GEO621A.

We are also careful to acknowledge the strengths and skills of our professional teaching staff within the physical space in the building. When a highly trained teacher is available in the building to teach Geo 621, then there is no need for a student to take the same course through a distance education course.

The very best use of distance education is to supplement a current schedule, which is not in harmony with the academic needs of a graduating student. For the strong student who needs all academic courses in Math, Social Studies, Sciences, English, French and Band, they will find that the current schedule accommodates them. However, if they have a post-secondary interest in trades they may need the flexibility of replacing the social studies course with a live hands-on course in their schedule and a distance education Social Studies course.





4.4 New Brunswick (NB)

Pop: 756,050

K–12 Schools: 314

K–12 Students: 101,079

of K–12 DE Programmes: 2

of K–12 DE Students: ~2,150

The current model of K–12 distance education has been in place in New Brunswick for much of the past decade. The responsibility for this online delivery model is divided between the Anglophone and Francophone divisions.

Distance Programmes

Both the Anglophone and Francophone divisions of the Department of Education and Early Childhood Development manage K–12 online learning programmes that are able to service secondary students in New Brunswick in either of the province’s two official languages. During the 2012–13 school year, there were approximately 1,600 students enrolled in the Anglophone programme and 549 students enrolled in the Francophone programme.

In addition to the distance education offerings for students in grades 11 and 12, the Department has also extended its online teacher professional development offerings to include teaching assistants and other adults within the K–12 system (e.g., nurses who administer the Healthy Learner Programme in schools). Further, the Department is also examining areas for expansion (e.g., more French courses, adding grade 10 courses, summer school, etc.), but this exploration is still in the exploration phase.

Governance and Regulation

There remains no specific legislation that governs K–12 distance education in New Brunswick. The system continues to operate based on collaboration between the Ministry of Education and individual school districts and a Ministry-published policy handbook. The policy handbook outlines in a very specific fashion the responsibilities of a variety of individuals at the Ministry, district and school level to ensure the orderly implementation of the distance education programme. Interestingly, in addition to school officials such as a registrar and local site facilitator, there are specific responsibilities outlined for both distance education students and the parents of students who are enrolled in distance education. This policy handbook is currently being revised.



4.5 Quebec (QC)

Pop: 8,155,334

K–12 Schools: 3,106

K–12 Students: 1,306,848

of K–12 DE Programmes: 3

of K–12 DE Students: 39,618

The use of correspondence distance education has been in place in Quebec since 1946. By 1996 this programme had evolved into the *Société de formation à distance des commissions scolaires du Québec* (SOFAD), a not-for-profit organization tasked with the development and production of distance learning materials that school boards utilize in their own district-based programmes for adult students. Since the creation of SOFAD, the province has also seen the development of several internet-based K–12 distance education programmes such as LEARN, *Écoles éloignées en réseau* (ÉER), etc. that have utilized a variety of asynchronous and synchronous technologies (e.g., learning management systems, virtual classrooms, video conferencing, etc.).

Distance Programmes

During the 2011–12 school year, SOFAD provided distance education course materials to 27,596 students. However, it is also estimated that SOFAD materials represent only about 60% of the materials used in distance general education (i.e., adult students who are 16 years or older in the school year). During the 2012–13 school year, LEARN provided a variety of distance learning opportunities to approximately 8522 English-language students from all nine English-speaking school boards. Finally, the ÉER had 296 teachers in 170 schools and have connected 3500 students through using Knowledge Forum and various synchronous tools.

Additionally, the Beauce-Etchemin School Board has offered summer distance courses for secondary students for the past 12 years. Further, during the summer of 2013, the Educational Consortium LLL (an amalgamation of the school boards of Laval, Laurentides and Lanaudière) began offering summer distance courses for some school disciplines.

Governance and Regulation

The Education Act in Quebec makes no reference to distance education. Since 1995 school boards have held the primary responsibility for distance education policies and regulations.

Vignette: Faith Christian Academy

Technology is here to stay and our students are using it. Texting, tweeting, hash tagging, blogging, FaceBooking—these are all verbs and nouns our students know and use. Online social networking offers students an alternative to the standard classroom setting and the LEARN programme in Quebec is using it to full advantage. E-learning may not be for every student, but it is the way of the future and we at Faith Christian Academy (FCA) appreciate all that LEARN has to offer our students.



Since September 2009, FCA has benefited greatly from LEARN. We have had students enrolled each year in secondary 4 and 5 math and science programmes. As a small school it is not possible to offer the full range of courses and levels so LEARN has been essential for our students. Introducing on-line virtual learning to students is not only progressive it is essential for success in today's ever changing technological world.

Whether using voice threads or live chats students have an opportunity to communicate on a regular basis with their teachers and daily demonstrate their learning. Access to resource materials such as videos or practice quizzes also provide additional help at any time of the day or night.

Students are no longer confined to the traditional school hours of eight in the morning to three in the afternoon for learning, nor are they required to do homework with out-of-date textbooks hoping that parents will somehow be able to help. In fact, a number of parents have stated how thankful they are to LEARN for providing support information to students.

It is our experience that students who take classes through LEARN continue to succeed in their post-secondary studies as it encourages autonomous learning, time management and independent thinking.



4.6 Ontario (ON)

Pop: 13,537,994

K–12 Schools: 4,913

K–12 Students: 2,051,865

of K–12 DE Programmes: ~82

of K–12 DE Students: 76,337

The development of K–12 online learning in the Province of Ontario began at the district level around 1994–95. For the next decade, these district-based programmes began to proliferate until 2005–06, when the Ministry of Education began the process of providing a centralized learning management system (LMS) and standardized online course content. Under this new model, districts were still responsible for the operation of their own distance education programme and could choose whether to use Ministry services and materials. At present, most school boards in the province maintain some form of online and/or blended learning programme, with many participating in one or more of the consortiums that have developed to allow school boards to cooperate in their provision of distance education opportunities for their students.

Distance Programmes

All 60 English-speaking and 12 French-speaking school boards offer some form of K–12 distance education. Many of these school boards have come together to form a consortium, designed to allow its school board members to work together to maximize their online offerings by sharing course offerings, resources and students. Examples of these consortia include:

- Ontario eLearning Consortium – 20 members
- Ontario Catholic eLearning Consortium – 29 members
- Northern e-Learning Consortium – 15 members
- *Consortium d'apprentissage virtuel de langue française de l'Ontario* – 12 members.

Along with the distance education offered by these public school boards, the Independent Learning Centre (ILC) continues to provide high school credit courses, high school diploma and GED High School Equivalency Certificate distance education opportunities to adolescent and adult students throughout the province. There are several private K–12 online learning programmes:

- Canadian World Schools
- Canada eSchool/Ottawa Carleton e-School
- Canadian Online High School

- GED Preparation Centre Private High School
- Link on Learning
- Ontario Virtual School; Ontario eSchool
- Virtual Elementary School
- Virtual High School

Finally, the eLearning Consortium (previously the Conference of Independent Schools eLearning Consortium) is a consortium of or private schools that deliver online curriculum for the students of the 19 member independent schools.

It is estimated that in 2012–13 there were approximately 51,853 students taking e-learning courses, including summer school, from school boards as part of the Provincial e-Learning Strategy—and approximately 125,373 unique blended learning logins. It is also estimated the ILC has 19,484 students enrolled in their correspondence courses. Finally, the most recent data available indicated there were approximately 5,000 students enrolled in private online schools.

Governance and Regulation

In 2006, the Ministry of Education launched the Provincial e-Learning Strategy, with the French component, the *Stratégie, d'apprentissage électronique Ontario*, launching a year later. As part of this strategy, the Ministry is responsible for providing school boards with various supports necessary to provide students with e-learning and blended learning opportunities, as well as providing e-learning leadership within the provincially funded school system. School boards are responsible for the delivery of e-learning, including programme direction, hiring staff, registering students, teaching students and granting credits. School boards participating in the Provincial e-Learning Strategy have access to a provincially licensed learning management system (LMS), Ontario Educational Resource Bank, E-Community Ontario and Seat Reservation System. Most school boards deliver e-learning credit-courses through the provincial LMS. Blended learning was piloted in 16 school boards in 2009–10 and 19 school boards in 2010–11. The success of the pilots, along with a new LMS contract, prompted the Ministry to make blended learning available to all school boards on September 1, 2011.

The Ministry is providing funding for one e-Learning Contact (eLC) per board in 2013–14. The purpose of the eLC position is to ensure that there is coordination and leadership in boards for e-learning, blended learning, Homework Help and Ministry-funded digital resources. ELC funding was also provided to school boards in 2011–12 and 2012–13.

As part of the Provincial e-Learning Strategy, students may enrol in an e-learning course that is offered by another board provided they do so through their home school. In such a situation, the applicability of provincially established fees for students taking e-learning courses from a school of another school board shall be worked out locally between the two boards. Where it is agreed that fees are

appropriate, the fee is the amount established by the Ministry. For 2013–14 the fee is \$725. Students enrolled in e-learning courses will not be charged any fees, including fees for registration, materials, or administration. The Ministry covers the students' costs when the board places these students on the appropriate funding register.

Vignette: Online Learning and the TDSB Local OSSTF

When the Toronto District School Board (TDSB) introduced its e-learning day-school credit programme circa 2008, the local Ontario Secondary Schools Teachers Federation (OSSTF) bargaining unit executive had immediate concerns that we had no workload language specific to the teaching conditions within which our members assigned to these courses would work. Among our specific concerns in relation to the introduction of this new programme were how teachers' workloads might be affected by having students from multiple schools enrolled in their courses and that the teacher would potentially be expected by students to be immediately available on a 24/7 basis. In addition, our class size caps at that time did not contemplate e-learning courses, nor did our language related to qualifications and staffing for online instruction.

Through an established process, the appropriate bargaining unit personnel shared these concerns with the appropriate personnel in management, establishing the following protections for teachers:

- A teacher must be qualified to teach the curriculum in the credit offering of an e-learning course and must provide his or her consent to teach in an e-learning programme. Once they have taught e-learning once, teachers are considered experienced, but not certificated in e-learning for the purposes of future staffing, but have the ability to have e-learning removed from their certification records at will.
- Class size limits that apply to traditional classes will also apply to e-learning classes.
- Initially no teacher could be assigned to teach more than three e-learning courses in a semester, or in a full year school, per year. This condition has now been modified so that a willing teacher could have up to a full timetable (six courses) of e-learning classes.
- Teachers establish availability hours for student access.

In agreeing to these limitations, both the Board personnel and union officials agreed that these working conditions would help to protect the quality of the new e-learning programme.

These conditions (like all working conditions agreed upon between OSSTF District 12 Secondary Teachers Bargaining Unit and the TDSB) are reviewed annually with the possibility of mutually agreed upon refinements being implemented. They also form part of the regular bargaining process where mutual agreement for change is not achieved.



4.7 Manitoba (MB)

Pop: 1,265,015

K–12 Schools: 746

K–12 Students: 195,152

of K–12 DE Programmes: ~38

of K–12 DE Students: 11,351

K–12 distance education began in the Province of Manitoba in 1927, with the introduction of print-based distance learning courses—now known as Independent Study Option (ISO). In 1992, the Ministry of Education began providing school-aged and adult learners access to grades 9 through 12 print-based distance learning courses, supplemented with audio teleconference classes hosted by an instructor at scheduled times during the school day. The latter sessions were known as the Teacher Mediated Option (TMO). Finally, in 1997 the Ministry began providing schools and teachers access to the online courses developed by the Ministry—along with use of the provincial LMS—to manage their own online or blended learning programmes, known as the Web-Based Course (WBC) Option.

Distance Programmes

The Ministry continues to support all three distance learning options. In theory, each school division is participating in one or more of the Ministry's options. However, the list of distance learning contacts provided on the Ministry's website includes several individuals who are no longer working for that school division, or alternatively the contact information is no longer accurate. As such, it is difficult to determine which school divisions are utilizing various distance learning options. During the 2012–13 school year, there were 2,950 enrolments in the ISO, 401 in the TMO and approximately 8,000 student enrolments in the WBC. Overall, there were about 11,351 distance education enrolments.

Governance and Regulation

The only reference in the Public Schools Act regarding distance education is mention that the Minister of Education can approve courses of study, including correspondence and other courses. Manitoba Education has issued other regulatory and policy documents, along with handbooks for each of the three distance learning options. The Ministry has been investigating options to support the formation of virtual collegiate(s) in the province and is currently working toward signing a Memorandum of Understanding with two entities to launch a three-year pilot startup for two virtual collegiates.

Vignette: InForM Net Consortium

The InForM Net consortium, currently exists as part of the St. James-Assiniboia School Division and Pembina Trails School Divisions. Online courses are available to students in both school divisions. These courses are also made available to students in other school divisions, in order to provide educational opportunities for students in school where online courses are otherwise not offered. Both school divisions provide staffing for the online courses. The InForM Net consortium also offers online courses as part of the St. James-Assiniboia School Division's summer school programme.



The goal of InForM Net is to provide all learners a wide range of course resources, regardless of a learner's needs or location. Through InForM Net, all senior students in the St. James-Assiniboia and Pembina Trails School Divisions can enrol in online senior level courses taught by certified teachers and may receive credit from their local high school. Courses are delivered online to schools, homes and other places with internet access, available anytime and anywhere—with the objective to try and meet the needs of all learners. InForM Net courses are based on a classroom model and differ in many ways from independent study courses. Each section of students has a single instructor for the duration of the course. In addition to teacher-to-student interaction, InForM Net courses emphasize student-to-student interaction and group work. Students are able, however, to pace their learning and manage their progress through the course.

InForM Net provides options for students in many situations, including students:

- Registered in high schools that may not be able to provide core, complimentary or optional courses for a variety of reasons.
- Who are currently on a homeschool programme.
- Mature and adult students in a variety of situations.
- Whose life and career goals frequently require extended periods of time away from their designated school.
- Whose family circumstances necessitate extended periods of travel or relocation.
- Enrolled in the St. James-Assiniboia and Pembina Trails School Divisions or any other school and/ or school division that is willing to grant credits obtained through an InForM Net course.

All interested high school students are encouraged to first contact the school counselor or school principal before requesting registration online. However, InForM Net is also available to receive email through its website to assist potential students with enrolment issues.



4.8 Saskatchewan (SK)

Pop: 1,108,303

K–12 Schools: 774

K–12 Students: 169,939

of K–12 DE Programmes: ~21

of K–12 DE Students: 2,611

Historically, Saskatchewan has had a system of K–12 distance education where the Ministry was responsible for the delivery of courses through online, televised via satellite and print-based courses. However, in 2009–10 the Ministry devolved the responsibility for distance education to the school divisions. Since that time, the Ministry has worked to ensure that teachers, schools and school divisions were able to build their own capacity to provide distance learning.

Distance Programmes

During the 2011–12 school year, 11 of the 28 school divisions operated and/or participated in some sort of distance education programme. Further, the Saskatchewan Distance Learning website listed a total of 14 participating programmes as offering distance learning opportunities for students. According to the Ministry, these programmes enabled 3,706 course enrolments from 2,611 distinct students.

Governance and Regulation

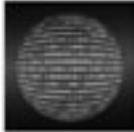
The only reference to distance education in the Education Act is related to the Technology Supported Revolving Fund, which indicates that it is to be used “to provide educational courses to all areas of Saskatchewan through the use of distance-education technology.” This section is no longer relevant with the devolution of distance education services from the Ministry.

Vignette: Horizon School Division

The Distance Education Academy Conference of Saskatchewan (DE Academy) had a very humble beginning some five years ago as an informal sharing opportunity between Distance Education Coordinators, Thad Swidzinski of the North East School Division and Jim Swan of Horizon School Division. Thad, a true distance education pioneer within Saskatchewan, shared a distance education

model that truly enabled small rural schools to be leaders—it was a vision that Horizon wanted as well. Soon it was evident that there was a need for a broader share of distance education programmes, best practices and resources. Ted Green of the Northern Lights School Division invited all DE Coordinators to meet and share knowledge of the programmes that were active within Saskatchewan. It was very evident that there was a strong desire to share and support each other; through a grassroots effort, the DE Academy was established to provide a provincial entity where we could collaborate, share and gain professional development.

DE Academy 2013
Serving students of Saskatchewan one byte at a time!



From a very small conference of 30 attendees and five school divisions in the first year, the DE Academy conference and DE Administrator/Coordinators group has steadily grown in the past four years to roughly 80 attendees who collectively represent 12 partner divisions, one community college and several private partners. The Academy has also recently established a Moodle hub hosted by the Prairie South School Division, where courses and learning activities are shared.

Joan Coy is a fifteen-year veteran principal at the Peace Academy of Virtual Education (PAVE) in Alberta. Since the academy's inception, Coy has been an absolute rock and essential ingredient to the success of Saskatchewan's DE Academy conferences. Having spoken provincially, nationally and internationally on topics relating to teaching mathematics, science, online education, Moodle and assessment, Joan has brought a wealth of knowledge and experience.

Some of the professional development themes that the Academy has addressed are: social constructivism and assessment, instructional design, interactive learning and inquiry (focused and personalized enrichment), distance education vision and goals, quality tools for assessment, collaboration and communication and distance education best practices and supervision.

It has been very interesting to see the models of distance education delivery transform over the past few years. Many divisions are moving towards more of a centralized model. Core subject areas such as Math and Science are being designed and offered by larger schools to smaller schools in both synchronous and asynchronous formats, allowing the ability to provide more subject offerings to the smaller rural schools. Many schools even have designated a distance education principal as well, who oversees their programmes.



4.9 Alberta (AB)

Pop: 4,025,074

K–12 Schools: 2,152

K–12 Students: 616,375

of K–12 DE Programmes: 21

of K–12 DE Students: 63,238

The use of distance education at the K–12 level in Alberta began in 1923, with the introductory experiment of education by mail for 100 students by the Ministry of Education. This experiment was formalized in 1927, when correspondence education became an official part of the Ministry under the Correspondence Branch. The use of online learning at the K–12 level began with district-based initiatives around 1995–96.

Distance Programmes

At present there is a single province-wide programme, the Alberta Distance Learning Centre (ADLC), which offers courses in print, online and blended formats. The ADLC also manages the Vista Virtual School and partners with Centre francophone d'éducation à distance, which provides distance education services to the province's Francophone students. In 2011–12, the ADLC had approximately 43,000 secondary students, 5,000 elementary/junior high and approximately 2,200 fee-paying adult learners enrol in one or more distance courses. Additionally, there are also 23 district-based programmes supported by the various public and separate school districts in the province.

Governance and Regulation

At present, the School Act grants the Minister of Education the authority to make regulations with respect to public and private distance education programmes. The Ministry has yet to exert that authority beyond outlining some specific requirements primarily related to the amount of required instructional time as a part of its their annual Guide to Education. Over the past five years, there have been several consultation initiatives with respect to distance learning in the province. The most recent of these consultations is an external initiative. In April 2012, Alberta Education contracted Schmidt and Carbol Consulting Group to conduct a province-wide review of distance education programmes and services. The review, which was initiated because of a pending renewal of the educational services agreement concerning the ADLC between the Ministry and Pembina Hills Regional Division, will

examine various service, governance and funding models for distance education. Additionally, the review will provide recommendations to ensure that distance education in the future reflects the vision set out in Inspiring Action on Education. The review is scheduled to conclude in January 2014.

Vignette: Coming to Alberta

Heritage Christian Online School is British Columbia's largest distributed learning programme when you count student numbers by full-time equivalent. Over the last ten years we have grown into a full service provider on a number of levels in BC. Our full time enrolment is well over 2,000. Every year we cross-enrol over 3,000 students from nearly every high school. We develop our own online course content and license to schools across Canada, both public and independent—so we assumed that we could easily work in other provinces, particularly our neighbor to the east. We have found in our two provinces greater differences in systems and standards than we first thought.

Alberta is as different from BC in how it approaches education as Canada is to the United States. On the surface we look the same. In terms of representative student enrolment, we are the two western provinces that have been at the top of online education for years in our country. There is the Western and Northern Canadian Protocol that is supposed to be aligning our curriculum. But, alas, we are still so very far from each other. Since we started two years ago we have been on a steep learning curve. Some of the key differences are found below.

Alberta is good at developing a relational leadership approach with its schools and divisions. BC is focused far more on regulation. We have had to look a lot harder to find out the regulations, learning outcomes and management systems in Alberta. In BC everything is spelled out on the Web. Yet, we have found that Alberta Education works more closely with its schools in their budgeting, developing three year plans and providing guidance with much less regulation.

BC has led the way because it has regulated distributed learning so that school districts and independent boards know what to do to get started and follow the rules. Alberta has moved a bit more slowly because of three factors:

- The grandfathering of unique conditions for Alberta Distance Learning Centre (ADLC) has made it difficult for start-up programmes in various school divisions and the private schools. This is changing as those unique conditions for ADLC are being removed.
- ADLC has adopted a much more blended approach to learning than what is found in British Columbia, which has focused more on the total distance learning student.
- Perhaps a third reason that Alberta Education has developed distance learning educational policy more slowly would be the well developed and resourced traditional home schooling movement in Alberta. In British Columbia, many homeschoolers transitioned to distributed learning because that is where the resources were.

Private schools have not aggressively embraced distributed learning, but we believe it will become a new frontier in Alberta. Heritage had to have a campus in Alberta before we were allowed to start online. There is considerable concern that we are just importing a BC programme—this is of course, not the case. We are now working closely with an Alberta based non-profit that is running the campus programme. We have started Alberta Christian Online School and are working with students all over the province. Instead of a programme that has multiple regulations that can almost stifle innovation, we are working closely to shape our distributed learning programmes with Alberta Education to fit them into the organization’s expectations.



4.10 British Columbia (BC)

Pop: 4,581,978

K–12 Schools: 1,942

K–12 Students: 638,835

of K–12 DE Programmes: 74

of K–12 DE Students: 78,168

K–12 distance education in Canada began in British Columbia in 1919, when the province began offering correspondence education to students living in isolated parts of the province. This centralized system of correspondence education continued until 1984, when the province began to establish the first of nine regional correspondence schools. K–12 online learning began in British Columbia in 1993, with the introduction of New Directions in Distance Learning and the EBUS Academy. By 1994, the responsibility for distance education had largely shifted to individual school districts.

Distance Programmes

In 2012–13 there were 56 district-level public distributed learning schools and 18 independent (or private) distributed learning schools that enrolled approximately 78,000 unique students in one or more courses. LearnNowBC continues to serve as a Web portal and single point of entry to information about public distributed learning schools for students, parents and educators in the province. Additionally, Open School BC provides provincial content and online hosting services on a cost-recovery model to Boards without the capacity or desire to manage their own.

Governance and Regulation

The distributed learning landscape in British Columbia has remained relatively stable over the past year. The legislative language in section 3.1 and section 75 (4.1) of the School Act, 2006, as well as section 8.1 of the Independent School Act, 2006, still govern the operation of distributed learning programmes. Both pieces of legislation contain similar language concerning the establishment of distributed learning schools “only with the prior agreement of the minister.” As such, these agreements between the Ministry and the school districts or independent schools serve as the main governance documents for distributed learning in British Columbia. In addition to these agreements, the Ministry also has a series of policy documents that outline the regulations that distributed learning schools must follow.

One regulatory change that has occurred focuses on altering the way that graduated adults are provided services under the province's Education Guarantee. Graduated adults enrolled in distance education after May 2012 may select courses from a specified list of funded courses. As well, the enrolling district receives a portion of the funding upon enrolment and the remainder upon completion of the course. Prior to May 2012, distributed learning schools received full enrolment funding for graduated adults taking any provincial or approved local course.

Another legislative change that was enacted during the 2012–13 school year was a provision in Bill 36 that provides flexible learning choices for all students. Provincial stakeholders have been consulted to help design an implementation plan for this legislation.

Vignette: The British Columbia Distributed Learning Administrators' Association



The British Columbia Distributed Learning Administrators' Association (BCDLAA) is a relatively new organization. It was established in the fall of 2010 at the annual Distributed Learning Administrators' meeting sponsored by the British Columbia Ministry of Education. The BCDLAA was conceived as an organization whose purpose is "to coordinate and promote the interests of Public Distributed Learning in the province of British Columbia in all its facets" (BCDLAA Constitution, 2011).

Membership in the BCDLAA is open to all public school districts, which include distributed learning schools within their ranks. The administrators of said schools are eligible for individual membership in the Association. Specific projects of the BCDLAA have included:

- Co-hosting the British Columbia Distributed Learning Spring Conference
- Attracting delegates and presenters from British Columbia and beyond
- Co-hosting various provincial meetings
- Advising the Ministry of Education on a number of policy and legislative initiatives
- Participating in a variety of meetings to discuss the provincial Education Compliance Audit programme
- Representing British Columbia's distributed learning community at various national and international conferences and meetings.

Distributed Learning in British Columbia is an ever-evolving field, both from the perspective of best practice and from the perspective of governing policies as established by the British Columbia Ministry of Education. The BCDLAA serves as a vehicle through which new and experienced administrators can pose their questions about policy and share ideas about best practice in annual face-to-face meetings, in monthly online meetings and via the BCDLAA website's discussion forums (<http://bcdlaa.ca>). There are also opportunities for discussion about what role distributed learning will play within the context of the British Columbia Education Plan. As "flipped classrooms" and

“blended learning” become more mainstream and as the focus on trades education and secondary/post-secondary partnerships takes a more prominent place in the educational landscape, distributed learning is uniquely positioned to support colleagues in neighbourhood schools and to provide students with a myriad of opportunities. The BCDLAA is committed to supporting distributed learning administrators as they navigate new waters and to providing educational leadership to the dedicated distributed learning teachers in British Columbia.



4.11 Yukon (YT)

Pop: 36,700

K–12 Schools: 28

K–12 Students: 5,122

of K–12 DE Programmes: 74

of K–12 DE Students: 78,168

As the Yukon Territory follows the same curriculum as British Columbia, the territory has a long history of utilizing distance education programmes from British Columbia. One of the longstanding partnerships has been with the Northern British Columbia Distance Education School. Additionally, the territory has been developing an internal video conferencing distance education programme for the past decade.

Distance Programmes

In the 2012–13 school year, four high-school courses were again offered via videoconference to rural students. Additionally, the Yukon established its own virtual school in September 2013 called the Aurora Virtual School. Aurora Virtual School will facilitate courses, provide support and direction for distributed learning and home education students in the Yukon Territory. Further, the territory embarked on a blended learning pilot project with one of its rural high schools. As a part of this pilot project, all the grade 10–12 students and teachers have been supplied with a laptop—a portion of their courses are done online with a teacher at their side, using the Moodle learning management system. Finally, the Yukon pursued partnerships with five additional British Columbia distributed learning schools to increase course choices available to students.

During the 2012–13 school year, there were 81 in-school students beginning to take distributed learning courses, seven in-school students who were continuing on with distributed learning courses and 63 home education students doing formal distributed learning courses. One hundred and fifty-one students in total were participating in distributed learning programmes.

Governance and Regulation

There have been no recent changes to the governance and regulation of K–12 distance education in the Yukon. The *Education Act, 2002* still allows the Minister of Education to provide distance education

courses and charge fees for students to access those courses. However, the 2003 decision to provide these distributed learning courses at no cost to students up to the age of 21 continues to be followed.

The Department of Education also continues to govern the operation of individual distance education programmes in the Yukon through individual Memorandums of Understanding (MOUs) that it signs with each individual programme. For example, the territory is in the process of finalizing additional MOUs with the five new school districts in British Columbia to create partnerships with their respective distributed learning schools to provide course access to Yukon students. Finally, Yukon Education was granted associate membership in the British Columbia Learning Network (BCLN) consortium.

Vignette: Watson Lake Secondary School

Watson Lake Secondary School is located in Watson Lake, Yukon. Watson Lake has a population of approximately 1,200 residents and the school has a population of approximately 85 students in grade 8 to 12. As the principal of the high school, I found that the students complained about their lack of choices for courses. Academically motivated students were not able to get the classes that they might have needed for university entrance to programmes that required prerequisite subjects such as physics, psychology, chemistry, French etc. Students that were not as academically inclined felt that they were not able to take classes that interested them, but instead were forced to take whatever courses were offered simply because they needed the credits to meet the requirements to graduate. In our old model, most of these students could not take electives they were interested in because many of the electives were timetabled next to a required course that they needed to complete grad requirements. Because of our staff numbers and small population I was unable to offer required courses more than once a school year. This lack of choice in course selection and the inherent control over students' education that it entails contributed to a lack of student engagement in school. It also contributed to low attendance rates, with some students leaving our community to attend different schools to enrich their education.



The staff members were very motivated and interested in pursuing a different educational model to try to address some of concerns arising from these issues. We started discussion around a blended model for instruction that would allow the school to offer the required courses eight times during a school year. This would allow students to pick the electives that they were interested in and then fill in their required courses. The blended learning model that we are using involves course content and resources being delivered on the Moodle platform, with a teacher in the classroom to provide direct student support, highlight key course concepts and provide lessons open to all grade areas on important subject specific skills.

There are two types of “dens”—similar to homerooms—in our School. The Humanities den offers English 10, English 11, English 12, Social Studies 10 and Social Studies 11. The Math/Science den offers Applications Work Math 10, Applications of Work Math 11, Foundations of Math 10, Math 11, Math 12 and Science 10. Students are required to attend each class at the time specified in the timetable. Once they are in class, working through course material is self-directed, with a teacher available to help them when they need it.

The course selection and the ability to work from anywhere are fostering a shift in our school culture. With students empowered by their direct input into course programming, they have become active participants in their own educational planning and are discovering a newfound relevance in their schoolwork. This new connection between personal areas of interest and educational programming has become one of the key factors driving the cultural shift within our school. We are slowly becoming able to offer the programming choices of a large urban high school, with the small class size and personal attention available in a small rural school context.



4.12 Northwest Territories (NT)

Pop: 43,537

K–12 Schools: 49

K–12 Students: 8,300

of K–12 DE Programmes: 3

of K–12 DE Students: 267

From 2000 to 2005, the Department provided the funding for schools to enrol their students in distance education programmes from other jurisdictions. Beginning in 2006, the Department revised its policy to only provide funding for successful students. Since 2004, the Department of Education, Culture and Employment has had a Memorandum of Understanding with the Alberta Distance Learning Centre (ADLC) for the provision of print-based and online distance education in the Northwest Territories. In recent years, various entities in the territories have also begun to undertake internal initiatives.

Distance Programmes

During the 2012–13 school year, there were 267 English and French students from the Northwest Territories enrolled in 441 distance education courses offered through the ADLC. Additionally, some individual education councils representing more remote communities have begun to create their own distance education programmes. For example, the Beaufort-Delta Education Council offered six courses to 24 students in the 2012–13 school year. Also, the Inuvialuit Regional Corporation (IRC) funded and managed Department-approved courses through the Sccyber E-learning Community (formerly Sunchild E-Learning Community).

Governance and Regulation

The *Education Act, 2009* allows various educational bodies to “authorize, supervise and evaluate the use of distance learning programmes in the provision of the education programme” (p. 72). Further, the 2004 MOU with the ADLC outlined specific responsibilities, duties and opportunities for both parties. Finally, Section 3.3 of the NWT School Handbook outlines a series of requirements for distance learning.



4.13 Nunavut (NU)

Pop: 35,591

K–12 Schools: 42

K–12 Students: 9,074

of K–12 DE Programmes: 1

of K–12 DE Students: 11

When Nunavut was first created, it continued to utilize the *Education Act, 1996*, a piece of legacy legislation from the Northwest Territories that was later replaced when the territory passed its own legislation. Similarly, Nunavut has also continued to utilize the legacy southern distance education programmes it inherited from the Northwest Territories.

Distance Programmes

Nunavut does not have any active K–12 distance education programmes. However, the territory has piloted distance education programmes in the past. Presently, a Nunavut-based distance education programme is under review by the Department of Education. The Department is examining how to best facilitate online distance education in classrooms across the territory and the costs associated with its delivery. The Department's ability to deliver distance education is restricted by the lack of bandwidth capacity, the inconsistencies of availability and infrastructure across the territory.

At present, the territory relies upon the Alberta Distance Learning Center (ADLC) for the provision of distance learning courses to Nunavut secondary students (primarily in a print-based medium). During the 2012–2013 school year, 11 students were enrolled in distance education courses offered through ADLC. There may be students enrolled in distance education courses beyond the ADLC; however, this information is maintained at the school and Regional School Operations levels and is not available at the time of this update.

Governance and Regulation

There are no provisions regarding distance education for K–12 students in Nunavut's *Education Act*. However, there are territorial agreements signed with individual distance education programmes authorized to provide services to Nunavut students in the K–12 system. At present, students wishing

to enrol in distance education courses contact their school Principal. The development of a ministerial directive regarding access to and delivery of distance education is underway.

Vignette: Students in a Southern Distance Education Program

Armaan – The distance learning programme I was enrolled in was with Vista Virtual School, a partner of the Alberta Distance Learning Centre (ADLC). I was enrolled for a total of four non-consecutive semesters of senior high school. I just did an online search to find the best programme. The courses were mostly based on online texts to read and videos to watch, with regular direction to refer to the textbooks. I was tested regularly through online assignments with questions in both multiple-choice and long answer formats. There were also a few courses that were partially or entirely completely on paper, where material had to be read in provided books and a series of booklets filled with questions on the topics had to be filled in and sent to the instructors to be graded. All exams were online and were held in the presence of an approved invigilator.

The main reason I took up distance education is because my parents moved to a small community in Nunavut for work. It was not much of a choice for me to take up distance learning. It was something I always wanted and this self-paced system would let me get as far ahead as I wanted. I found the material to be not much different than what I'd expect from a normal schooling setup. I found it relatively easy to get through, and with constant feedback and reminders from the instructors and markers, any fault was easily cleared up. The only real problems I found with that type of education were that I was never completely organized and it took away a major part of normal social interaction, with long gaps between workdays occurring regularly and my rarely ever interacting with any peers. Ultimately, I barely managed to finish before I normally would have, but apart from that, there was no real drawback. I applied to and got into the University of Calgary into my programme of choice. Content-wise, I feel like I had a better foundation due to the level of self-reliance distance learning fostered.

Zeeshan – I was enrolled in was the ADLC for a total of two academic years: grade seven and grade eight. My older brother was enrolled in it first and as it worked well for him I was enrolled as well. Two of the courses mainly consisted of reading text from either the website or from the textbook, followed by doing online assignments or doing tests. The other two courses consisted of doing readings from textbooks followed by pre-made assignment booklets, since I chose to take those two courses as text-based courses. All the courses ended with an exam taken online with an invigilator that needed to be approved beforehand by the ADLC staff.

I started distance learning because my family moved to a small town in Nunavut. To ensure I didn't fall behind, I started distance learning. The course material actually worked much better than I thought it would. The assignments took me through the lessons, which made it really easy for me to understand the concepts. The best part was the pacing. Since it was completely based on my skill level and understanding, I was free to go as quickly or as slow as I wanted. The few problems I faced concerned the

lack of feedback and the minimal amount of social interaction. Contact with teachers was always a very tricky process. With the time difference between, I always had trouble contacting them to seek direction. I mainly had to rely on e-mail for instructions. The social aspect of distance learning was very hard for me since I had no peers to interact with the entire time. However, the entire distance learning experience made me a very independent learner. I am currently in grade eleven and I feel that my two years doing distance learning has put me at an advantage since it taught me to problem solve and think for myself.

5. First Nations, Metis and Inuit

At present, there are several K–12 distance education programmes that do not fall under the jurisdiction of any province or territory. In previous reports each of the online and blended learning programmes in these First Nations communities were reported under the province or territory they were located. This section is a new addition to the 2013 *State of the Nation: K–12 Online Learning in Canada* report and an attempt to highlight the fact that these K–12 distance education programmes operate under different regulatory regimes.

The new section begins with a federal profile that is similar in format to the traditional provincial and territorial profiles found in previous editions of the *State of the Nation: K–12 Online Learning in Canada*. This profile describes the K–12 distance education activity and regulation of K–12 distance education programmes under federal jurisdiction.

The section continues with a vignette on each of the five K–12 distance education programmes under federal jurisdiction that are currently operating within Canada. Each vignette contains a brief background, along with a short history of the programme and the specific instructional model that is currently used by the programme.

Finally, this new section concludes with a series of brief issue papers that explore topics specific to K–12 distance education within the FNMI community. In the first FNMI brief issue paper, Vince Hill of Credenda Virtual High School describes the funding issues facing a variety of the FNMI K–12 distance education programmes. In the second FNMI brief issue paper, Kevin O'Connor of Mount Royal University delves into the use of online and blended learning as a potential alternative to better serve FNMI students who are currently not being served or are being underserved by traditional education programmes. In the third FNMI brief issue paper, Norm Vaughan of Mount Royal University examines an evaluation study that was conducted with SCcyber E-Learning Community programme through the lens of the *Seven Principles of Effective Teaching*.



5.1 Federal Government

Pop: 1,400,685

K–12 Schools: 2,230

K–12 Students: 138,400

of K–12 DE Programmes: 5

of K–12 DE Students: 1,805+

First Nations and their regional organizations have responsibility for managing and delivering education programmes and services in a number of band-operated schools on reserve across Canada. In addition, Aboriginal Affairs and Northern Development Canada (AANDC) delivers services directly on reserve in seven federally operated schools and covers the tuition costs for First Nation children attending provincial schools off-reserve but who still live on reserve.

Distance Programmes

At present, there is a total of five K–12 distance education programmes that fall under federal jurisdiction. Two of these are located in Ontario (i.e., Keewaytinook Internet High School and Gai hon nya ni: the Amos Key Jr. E-Learning Institute), one in Manitoba (i.e., Wapaskwa Virtual Collegiate), one in Saskatchewan (i.e., Credenda Virtual High School) and one in Alberta (i.e., SCcyber E-learning Community). There are other First Nations, Metis and Inuit organizations that have been exploring the adoption of K–12 distance education. However, for a variety of reasons – lack of bandwidth or connectivity, lack of community buy-in, lack of expertise for implementation and others—they have not yet established distance education programmes.

Governance and Regulation

Approximately 60% of First Nations students attend schools on reserve. In support of these students, AANDC provides funding support directly to Band Councils and First Nations education organizations. First Nations or their respective regional organizations have responsibility for managing and delivering education programmes and services in band-operated schools on reserve.

For students who live on reserve but attend provincial schools off-reserve, AANDC pays the tuition that the applicable province charges for non-Aboriginal students. This is paid to the First Nation in question or directly to the provincial Ministry of Education, depending on the agreement in place.

AANDC also delivers services directly on reserve in seven federally operated schools. In 2011–2012, AANDC invested approximately \$1.55 billion in First Nations K–12 education to support First Nations and Inuit students across Canada. This funding was in addition to the approximately \$200 million to support infrastructure costs for education facilities.

Each K–12 distance education programme under federal jurisdiction enters into an agreement with AANDC to determine the nature of their funding arrangement. These agreements may be directly negotiated or reached through acceptance of a proposal to specific AANDC programmes. In addition to AANDC, each of the K–12 distance education programmes also has to work with the individual Ministry of Education in the province they operate in order to gain accreditation. The accreditation process involves a validation that the K–12 distance education programme is using provincial curriculum, which allows the programme to grant provincial credit. As Ministries cannot fund enrolment in these federal K–12 distance education programmes, the programme must also enter into agreements with individual school districts/divisions to serve off-reserve students.

5.2 Program Profiles



Gai Hon Nya Ni: Amos Key Jr. E-Learning Institute

<http://www.amoskeyjr.com>

Gai hon nya ni: the Amos Key Jr. E~Learning Institute's primary mission is to partner with the Ontario Ministry of Education and the Niagara Peninsula Aboriginal Area Management Board Inc. to establish a regulated private secondary school, in order to offer the suite of existing Ontario secondary school credit courses so one can attain their Ontario Secondary School Diploma. Secondly, its mission is to partner with stakeholders and partners to create and craft new, vital, dynamic and timely credit courses in order to elevate standards for Aboriginal Youth of Ontario, so they too may enjoy a just future and a quality of life that is second-to-none! Gai hon nya ni: the Amos Key Jr. E~Learning Institute's vision is to provide an exciting educational opportunity for Ontario Aboriginal youth to acquire and attain their Ontario Secondary School credits and Diploma. This will be achieved by harnessing and implementing state-of-the-art technology and software in a virtual yet synchronous educational environment, using the internet to offer Ontario secondary school credits online.

History

Gai Hon Nya Ni: the Amos Key Jr. E-Learning Institute and Foundation are now in their fourth year of operations. The programme was proposed to the Niagara Peninsula Aboriginal Area Management Board (NPAAMB) as an idea to assist in addressing the educational gap within our communities after Amos Key Jr. saw a presentation from Sunchild E-Learning in Alberta. NPAAMB saw this as a chance to provide seed funding to an organization that could catch students who have fallen through the mainstream educational cracks.

It was the NPAAMB Board of Directors (with the exclusion of Board Member, Mr. Amos Key Jr.) who unanimously voted to name the E-Learning Institute after their fellow colleague, Mr. Amos Key Jr. for his many years of honorary achievements, exemplary leadership and public service in the education sector.

The name "Gai hon nya ni" originates from the Iroquoian Cayuga Language and translates to mean "they are learning."

A Model for Success

Our experienced certified teachers have a passion for teaching First Nations students and facilitating teaching using online synchronous classes. This allows us to be able to accept students from anywhere there is internet access. Mentors will help students with technical support and encourage student participation for their ultimate success by hosting online student body assemblies and holistic learning opportunities.

Our e-learning model is unique as it allows direct interaction between students and teachers on a regular basis in real time. Within this engaging and interactive educational model, a virtual classroom is formed.

Gai hon nya ni is committed to instilling a holistic foundation of education for future leaders and citizens of tomorrow. To meet this philosophy Gai hon nya ni offers and embeds social, emotional, civil, linguistic, artistic, ecological and spiritual intelligences throughout their course offerings. Alumni will graduate with a solid foundation, a developed moral compass and an intellectual spirit.

By marrying indigenous and non-indigenous ideologies from their civilizations, alumni will graduate with a sense of history, nationalism, patriotism and humanity that is second to none.

Gai Hon Nya Ni armed with its quiet diplomacy is now embarking on this educational initiative in an attempt to respond to and address the 'Moral Imperatives' facing this country regarding Aboriginal Youth.

A few Moral Imperatives include:

- High school drop-out rate
- Disenfranchisement (with no 'organized voice') of parents and their young people as they migrate to the urban centers
- High teen suicide rate
- High incarceration rates
- 16 Year education gap
- Removal of young people from their communities to get an education
- Pride in who we are as First Peoples

At Gai hon nya ni our students will become knowledgeable in emotional intelligence. The emotional quotient inventory (EQ-I) is not only embedded in our courses but also offered as a component in Grade 9 and Grade 10 Learning Strategies (GLS10 & GLS20).

Gai hon nya ni encourages students to explore their capacity for learning. The exquisite teaching style at Gai hon nya ni guides our students to become emotionally intelligent while achieving academically. Emotional intelligence is the key to greater success and emotional awareness allows students to be the guide of their own moral compass.

Students have the opportunity to acquire four credits in Native Languages. Fall language class will be Cayuga and spring language classes will be Mohawk and Ojibway. Native languages are our passion so expect to see many more language courses developed as we grow.

We ensure that our students are exposed to contemporary native studies and native literary authors. This instills a sense of pride in who we are as First Peoples and offers an awareness of our modern day issues.



Credenda Virtual High School and College

<http://www.credenda.net>

Credenda Virtual High School and College is a not-for-profit, registered charitable First Nations and Métis educational institution in Saskatchewan. We are well positioned to educate First Nation students for success. We also understand the need for improved training at the post-secondary and specialized training levels (e.g., courses in business management, human resources, project management, etc.) for First Nation and Métis learners. Credenda is committed to the development and delivery of innovative, technology-based education and training initiatives that meet the needs of all students, communities and industry.

History

First Nations schools have dramatically increased the number of students graduating from Grade 12. However, the 2004 *Prince Albert Grand Council (PAGC) Educators Report* identified a major concern. The Grade 12 graduates are generalists because their schools cannot offer the higher-level math and sciences required by professional degree programmes like medicine and engineering. This is not the fault of the schools but of geography. Remote schools rarely have enough interested students to justify offering specialist classes (for example, Physics 30) and even if they do they may not be able to hire and retain a specialist teacher.

While originally formed through the Prince Albert Grand Council, Credenda is now an autonomous, charitable, First Nations educational institution. The name Credenda stems from our background, originally working with Cree, Dene and Dakota (CREe-DENe-DAkota) communities in northern Saskatchewan. In our high school we currently work with First Nations, rural and northern communities in Saskatchewan. Our college and training programmes enrol students from across the Prairie Provinces.

A Model of Success

First Nations, Northern and rural communities and schools have difficulty attracting and keeping qualified mathematics and science teachers. This results in limiting a student's options after high school. Credenda is strongly committed to the development of innovative, technology-based education and training initiatives that meet the needs of industry, simultaneously leveraging resources from government and providing educational tools for the community. Credenda achieves these goals through synchronous (live) online learning. Online learning is one of the fastest growing trends in educational technology use. Credenda believes that using the synchronous (live) delivery method provides learners with the best of both worlds.

Credenda is a unique organization; we present opportunities for individuals to complete their education and training needs in a location of their convenience—the only requirements are a computer and online connectivity. While Credenda recognizes the importance that developing successful children and youth has for ensuring a prosperous Saskatchewan, we also understand the need for improved training at the post-secondary and specialized training levels for Aboriginal learners.

Student success is our number one priority. We recognize that our First Nations and Métis learners have unique challenges to overcome when they set out to further their education and training levels. That is why we have staffed our organization with a full-time guidance counselor, IT supports and experienced teachers who understand the complexities involved with Aboriginal education and training. While some other institutions have struggled to maintain a 50% success rate for on-reserve programming, Credenda has achieved close to a 75% success rate with on-reserve programming since 2008. College and training programmes have seen success rates of close to the 90% mark. We have found a formula that works and are eager to expand our service delivery in order to better equip the province and industry with a skilled workforce that will help with continued social and economic growth.



Keewaytinok Internet High School

<http://kihs.knet.ca>

Keewaytinook Internet High School (KiHS) is a blended learning high school in Northwestern Ontario serving on average 16 First Nation communities yearly. It was established as a pilot project in 1999 and worked with only three communities. KiHS uses e-learning as the means of delivery and also has a local teacher who works with the students in a classroom in the partner communities. Students are required to attend the classroom each day and complete online activities while getting help, clarification and direction from the local teacher. The funding for the programme is established through a nominal roll process, where formula funding comes from Aboriginal Affairs and Northern Development Canada (AANDC). KiHS claims students in the partner communities and receive funding directly from AANDC. No other funding is received for these students outside of KiHS.

History

KiHS developed as the First Nation chiefs recognized the need for a community-based secondary option which would help deal with issues students were facing when they had to leave their communities at sometimes as early as thirteen years of age. The resulting social implications and personal effects this had on students, families and communities made the community-based KiHS a necessary solution. In the partner communities, students now have the direct influence and guidance of family and community as they pursue secondary education.

KiHS has developed into a quality secondary programme in the territory, offering all streams of courses leading to workplace, college and/or direct entry into university after high school. Initially the programme targeted Grade 9 and 10 students as a transition programme students moving to senior high school. However, as the demand from parents and students grew for senior courses, the programme expanded to now offering about 70 secondary courses. The achievement results have continued to rise each year and we have graduated over 70 Grade 12 students with their secondary diploma since beginning to offering senior courses in 2006. Many parents and students are making KiHS their first choice for secondary education and are developing many technical and academic skills in the programme, which promotes independent thought and students taking control of their educational success.

A Model of Success

The model used at KiHS is mainly asynchronous delivery using Moodle as the learning management system. KiHS instructors develop a course that includes appropriate content for the students we work with and post lessons online. The activities are made available weekly and local teachers ensure students are moving along. The instructors are responsible for marking activities and provide feedback

to students weekly on their progress. However, we also use synchronous technology as well as video conferencing tools such as *Elluminate*, *Adobe Connect* and face-to-face mentoring with the local KiHS teachers. KiHS has a technical staff person who travels to all communities and works to make sure the connectivity and other technical needs are met with the help. An outside helpdesk is provided through Schoolnet, a federally funded internet access programme for First Nations schools in Canada.

The local community supports the programme by identifying and providing a space for the classroom as well as accommodation for the teacher. They lend any support needed from their local Education Authority and make available the local school services for gymnasium activities and maintenance support. Each community has a member present on a KiHS Steering Committee that helps guide the developing progress of the programme as we respond to changes in education provincially, as well as addressing community needs.

KiHS has been a solution for some of the issues resulting when students have had to leave First Nations communities for a secondary education. Our programme has grown and changed over the years to reflect the needs identified that will improve student achievement. KiHS is the only secondary programme in our territory to offer such a variety of courses at all grade levels and streams in the First Nation communities. The programme is also placing a secondary school in each partner community, with all the services most secondary provincial schools would have. This is a great achievement since many of the KiHS classrooms have a small number of students. Due to the presence of KiHS, the communities have more opportunity for their members to receive quality education while remaining at home—a privilege all in Canada should share.



SCcyber E-learning Community

<http://www.sccyber.net>

SCcyber E-learning Community is an accredited private school (formerly known as Sunchild E-learning Community). The school has seen course completion rates for Aboriginal students greater than 70% and graduation rates greater than 80% over 14 years of operations. This compared to graduation rates of less than 4% and course completion rates of less than 20% in northern Alberta public school divisions. The SCcyber E-learning Community programme was developed from a "passion to dramatically improve education through Aboriginal people's inclusion and participation into Alberta's and Canada's economy."

History

SCcyber E-learning was started in 2000 to address the inexcusable graduation rates of Aboriginal students exposed to the traditional "colonial school" model of education on reserves. Currently, SCcyber E-learning delivers educational services to over 20 First Nation communities throughout Alberta and into the Arctic Circle in the Northwest Territories. The SCcyber programme has been recognized by Aboriginal Affairs and Northern Development Canada (AANDC) for graduating First Nation students. In 2000, e-learning began on four reserve locations offering ten courses. Now we offer over 80 Alberta Education approved academic courses with over 700 students taking over 2,000 courses annually.

A Model of Success

SCcyber E-Learning is different from conventional distance learning programmes in that it creates accountability and interaction between student and teacher. We offer 100% synchronous instruction in over 80 courses offered towards an Alberta high school diploma! Students are expected to be logged into the computer during class times and can speak with the teacher at any time through our live virtual classroom interface. Teachers interact on a whiteboard where lessons are discussed and students can visit a website together or share a desktop to solve a math problem. The teaching and learning relationship between teacher and student begins with email, text messaging or via a microphone. Experienced certified teachers with a passion for teaching First Nations students have personally created the online lessons, which contain interactive elements—even the asynchronous component is engaging to our students. Pedagogically our instructors are doing more than just passing on information. At SCcyber, we are committed to helping our students cultivate self-direction and we are purposefully making learning a reflective process through metacognitive pedagogy.

In most cases, students work within a physical classroom environment where a Mentor addresses technical concerns and ensures student participation at the face-to-face level. Achievement is tracked on a weekly basis so that intervention and support can be provided as soon as it becomes necessary. Accountability is a very significant facet of SCcyber's success. Every Monday morning, SCcyber provides an updated report card mark to all students in each of their courses. Mentors

at each of our site locations can download data through their E-learning campus on exactly how their students are progressing in their virtual courses. This high level of accountability and tracking provides students with assistance in time management and how they will plan their week to tackle their assignments. However, the programme also allows for flexibility. Students who miss class time or change residences can easily catch up by reviewing archived classes. This system also allows students to work at a comfortable pace.

In 2012, Mount Royal University studied our e-learning model and has determined several key elements in our e-learning design that make the SCcyber pedagogical approach a gold standard for Aboriginal education. The SCcyber programme has been awarded and recognized provincially, nationally and internationally for its value to society. Recently it has been recognized as a “Changemaker” with the Ashoka foundation as the top project for student retention from across Canada as part of the Changemakers Initiative. In keeping with being at the forefront of educational technology, SCcyber E-learning is now offering 100% mobile learning compatibility with all course offerings. With the recent conversion of all our course content to HTML5, students can view our lessons or connect live into one of our virtual class sessions from their phones or tablets, for example using iPhones or iPads. Learning has never been easier or more accessible!

An Investment in the Future

SCcyber E-Learning Community has met with remarkable success. In record numbers, adult and high school-aged students are re-entering the school system, staying in school and graduating with their high school diplomas through SCcyber. SCcyber provides individualized career planning and goal setting to focus students on an exciting future for themselves and their families. As a not-for profit charitable organization, SCcyber receives donations from various corporate sponsors who support the tuitions for students in the SCcyber programme. This partnership with industry, in conjunction with government support, continues to help to create skilled candidates for advanced training and future employment.

SCcyber E-learning College

SCcyber continues to work with post-secondary partners like the Northern Alberta Institute of Technology (NAIT) to offer the Oil and Gas Production Operators Level 1 & 2 certification. These courses have catapulted students into employment with oil and gas companies. In 2014, With corporate support, SCcyber will be moving into developing a post-secondary arm called the SCcyber E-learning College and will be offering “Power Engineering 5” to students throughout Alberta. This development will further train students to develop high-demand skills needed in our oil and gas sector. First Nations students will be in the lead in terms of engaging with our economy. Through this unique training, they will be well positioned to provide the human resources necessary for strategic growth.

Wapaskwa Virtual Collegiate (WVC) is a growing e-learning institution that targets high school First Nations students in Manitoba, Canada. Historically, educational opportunities for these students has been (and continues to be) limited due to a number of factors including:

- Different levels of funding
- Total absence of, or limited access to local secondary programming in many communities
Inadequate sections of available classes
- Impromptu cancellation of small classes
- The lack of available specialty teachers and classes.

Online learning with WVC allows First Nations students from across Manitoba to access supportive teachers outside their home communities.

History

The Manitoba First Nations Education Resource Centre (MFNERC) first received funding under the Education Partnerships Program established by Aboriginal Affairs and Northern Development Canada, in 2009. The MFNERC took the lead in writing an educational partnership's success story when it created the WVC. During its inaugural year, the WVC first developed one trial course to be delivered online. The WVC found a First Nations school that had three willing student participants. The trial was successful and the WVC programme was ready to expand and grow. Over the past five years, WVC offerings have grown to 20+ courses delivered to 800+ students from 13 First Nation communities. By working together, local school administrators have begun to streamline planning by moving toward common start times and class schedules, in order for students to have full access to the WVC online course timetable. Since its inception, the WVC has been working hard to gain status as a provincially accredited institution. The WVC has worked with Manitoba Education and Advanced Learning and has completed two contiguous years of courses (grades 9 and 10) as part of the initial requirements to become accredited. On November 16, 2013, the WVC became the first fully accredited e-learning institution in the province of Manitoba.

By the end of 2013–14, students will have access to most of the core courses from grades 9 to 11. The WVC plans to continue adding to its programming options through ongoing course development. The WVC is staffed with content developers, media professionals and teachers who work as a team to bring the courses to the communities. The course development process at WVC involves planning, analysis, design, development, implementation and evaluation. During the initial pilot of a course, instructors and course developers note and address deficiencies in the course

content. By working together, the WVC ensures consistency and continuous improvement in the development and evaluation stages.

Model for Success

Each of the WVC courses is rich in content and available to students online 24 hours per day. Inclusion of embedded videos, animations, simulations, online links to additional sites for student reference, resource and practice have all been included as part of our course development structure. In addition to accessing the course content directory, the live classes are scheduled synchronously, in real-time during the school day, to include daily instruction, interaction and support between the provincially certified teachers and students in the communities. Many forms of communication can take place online with our Web-conferencing tool, *Illuminate*, which features a large whiteboard area for lessons along with live drawing tools, instant text chat, one button quick polling responses, live audio, web tours, application sharing and live camera interaction. Each live class is designed for 75 minutes of instruction per day, Monday to Friday. Teachers record each class and afterward recordings are archived, catalogued and posted as part of the content directory. *Illuminate* integrates smoothly with our learning management system, *Desire2Learn*, by allowing easy login to the live classroom and automatic postings of live daily lesson recordings. Whiteboard notes are also exportable and can be saved for later posting within *Desire2Learn*.

WVC enhances the academic options that are available at First Nations high schools. Due to staffing and class sizes, many classes are offered only once a year, creating potential conflicts in scheduling. Students can take online courses with WVC to enrich the course offerings by including technology applications designed to complement the subject matter. WVC courses do not require prior online course experience to participate, as there is an on-boarding programme for all new students during the first week of classes. WVC was created to help First Nations students in Manitoba access new sources of education and find new learning opportunities for students to be successful in 21st century. Moving toward the future, the WVC plans to revamp its courses by creating working models that could be used for credit recovery programmes and summer school options.

Each year, the WVC continues to develop and add to our course calendar, thereby increasing curricular options for the students and schools we serve. This year, seven more courses will be added to the WVC course list of offerings. As the WVC grows, more communities are relying on the WVC to provide both core and optional programming. The WVC is becoming more sustainable as confidence in the programme continues to grow with renewed yearly partnerships. The options increase for community schools and the students attending these institutions. The WVC works collaboratively with the First Nations school teams by partnering at the beginning of the semester with the host schools. The MFNERC and First Nation Education Authority enter into an agreement defining how the schools will work together to provide the class(es) for the student. The WVC and home school will examine the technology at the local level. Where necessary, the WVC IT technician can visit the school to assess the school's technology and Internet capacity. Bandwidth capacity in First Nations communities can

be a limiting factor for local enrolment in WVC classes. However, the WVC can work to help streamline and allocate bandwidth with Manitoba First Nations SchoolNet. The host school must also provide a suitable physical space, a wired Internet connection, computer hardware and a school staff member to act in a facilitator role throughout the semester. The WVC will provide the online teacher, access to course content and IT desktop support, where required.

5.3 FNMI Brief Issue Papers

Issues Related to Funding FMNI Online Learning Programmes

Vince Hill, Credenda Virtual High School

Study after study tells a similar story across Canada about the low graduation rates among our First Nations populations. From 1995 to 2010, Aboriginal Affairs and Northern Development Canada (AANDC) has funded education at approximately the same level from year to year, with little or no change in the graduation rates for on-reserve students. It remains around 35% nationally. Over 106,000 First Nations students during that period did not receive a high school diploma. Many of these students never enter the workforce because they do not have a high school diploma as a minimum requirement for many of the trades and skilled labour jobs. This in turn costs the Federal government more by way of social assistance.

Each year AANDC reviews their spending and measures it up against the graduation success rates. They want to see better results. As First Nations people, we want better results too. However, there are no easy solutions to address these challenges. Some might think that the fix is a First Nations Education Act. While we would not disagree that standards need to be implemented to ensure our children receive a quality education, the methodology for implementation has been wrong spirited. A collaborative approach is necessary, with First Nations education specialists taking the lead for dialogue and development. AANDC Minister Bernard Valcourt in the House of Commons stated on November 22, 2013 that instead of throwing money at the problem, we are suggesting that we work together to find a solution that will bring about results. Working together is not unilaterally determining how the funding will be dispersed to educational authorities and service providers, before legislation and policy is even developed and vetted through Parliament.

When it comes to e-learning funding, the landscape becomes more complicated than standard Band Operated Funding Formula (BOFF) funding that each of the First Nations schools receives to operate. Keewatinook Internet High School (KiHS) receives nominal roll funding for each of the students enrolled with the programme. Prior to KiHS delivering online classes, most of their students would have had to leave the community. KiHS delivers a full programme to students.

Wapaskwa Virtual Collegiate has received New Paths for Education funding since its inception. It was created primarily to supplement local school programming. Credenda Virtual High School was originally funded based upon actual expenses up until 2013. AANDC funded Credenda based on the percentage of FN student classes out of the total number of classes. If Credenda had 75% of the student classes populated with First Nations students, then AANDC reimbursed 75% of the high school budget.

However, in 2013 AANDC changed how it funded Credenda Virtual High School. This change was precipitated by the shift in the organization's own thinking about funding. In their documentation

to Credenda, AANDC stated that e-learning was considered a method of delivery and that virtual high schools (VHSs) that deliver eLearning are not considered band-operated schools. In fact, they suggested that VHSs do not have any students that meet the requirements of the standard nominal roll process which is applied to Band Operated, Provincial, Private or Independent Schools. As a result, AANDC does not believe it has a legal obligation to fund VHSs or to use the standard tuition methodology or nominal roll processes to determine funding levels.

In order to ensure First Nations students have access to specific classes, AANDC did make the decision to support the utilization of VHSs. However, in order to continue this practice, they needed to draft specific guidelines in order to continue to support this alternative delivery method while ensuring value for money and control over programme costs. As part of the agreement, they established the following guidelines:

Eligibility: According to AANDC a VHS can receive funding for course fees for a student, if a student is enrolled in and attending a band-operated school in Saskatchewan recognized by the Province of Saskatchewan; has an established pattern of attendance (minimum 50% attendance), and attending on the last instructional day of the census dates; is aged 4 to 21 years on December 31 of the school year and be in grades 7 through 12 and; is ordinarily resident on a Saskatchewan reserve. (Aboriginal Affairs and Northern Development Canada, 2013, pp. 3–4)

Ironically, even though VHSs are not considered to be Band Operated schools, they are still required to follow the standard eligibility requirements for all band-funded schools.

Furthermore, AANDC requires that all students must be taking the majority of their classes at their local band-operated school and are enrolled in no more than 40% of their total classes offered by the VHS. Virtual high schools are eligible for funding to provide courses and support for students residing on Saskatchewan First Nations, in grades 7, 8 and 9 for mathematics and science classes and students in grades 10, 11 and 12 for literacy, mathematics and science classes. The Band-Operated schools must have a certified site teacher in place to supervise the students. The VHS will not receive funding from AANDC for a course where an equivalent class is already offered at a bricks and mortar Band-Operated school.

This last part is rather shortsighted on the part of AANDC, since a student who does not successfully complete a class in the first term will not be funded to take their class from the VHS and may be only one class short for graduation purposes. As a result, the student is often required to return the following fall and take the class along with two additional classes, in order for the local band-operated school to receive full nominal roll funding for the year—instead of paying for one additional class with the VHS in the previous term. The less desirable alternative would be for the student to not take the class and not receive a diploma. The VHS also does not receive funding for classes that fall outside the categories of mathematics, sciences or literacy (such as Psychology 30), even though the student may require the class to graduate and move on to university and even if the class is not offered by the on-reserve school.

AANDC will not fund students who live on-reserve but who attend a provincial, private or independent school and are also taking classes via a virtual high school—or if the student is home schooled, even if on-reserve.

AANDC now funds VHSs in Saskatchewan based on the tuition rate of the nearest provincial school to the student residence. This means that with the 18 public school divisions in Saskatchewan, each tuition agreement with the provincial government is different. The differences depend on where the students are living and are based on the class rate paid by AANDC for each student. This differentiation makes student funding difficult to administer. Accuracy in data management is imperative; AANDC disallows the funding for a student if the information is not correctly entered or is not invoiced properly.

Further to this, Credenda received a letter from AANDC detailing the role and involvement of AANDC in supporting Credenda since 2005. In the letter AANDC added that the proposed education legislation:

...will impact Regional funding methodologies and processes. To that end, we anticipate that the resulting governance structures will secure and pay for e-Learning services directly through a method of their own choosing using existing education resources, not unlike Provincial models. We anticipate draft legislation by the end of this summer and potential implementation beginning September 2014, at which time AANDC will work towards providing all education resources directly to First Nation or education authorities.

However, AANDC stated that it would:

... work with Credenda towards a new funding arrangement, for the period of September 1, 2013 to August 31, 2014, based on the revised AANDC-VHS management regime. Regional staff will meet with Credenda representatives to again clarify eligible students and classes and the new delivery and reporting requirements.

As discussed at our May 16, 2013 meeting, we advise Credenda that it should assess how it will work with First Nations to transition to a direct fee-for-service model. We expect that, as of September 1, 2014, AANDC will no longer make direct payments to Credenda or any other service provider as AANDC will provide resources directly to First Nations or educational authorities, whom are in the best position to make decisions on the educational needs of children in Band-Operated schools.

Suggesting that our agreement will cease due to proposed legislation, before draft legislation has even been produced, seems rather presumptuous on the part of AANDC. The organization appears eager to find ways out of supporting students from receiving equitable access to subject specialists and course content. If we are to address the low achievement results across Canada, the last thing we should do is reduce the funding for school programmes such as Credenda, KiHS and Wapaskwa.

References

Aboriginal Affairs and Northern Development Canada. (2013). *Management regime for virtual schools - Contribution funding agreement for Credenda Virtual High School*. Ottawa, ON: Author.

The use of ICTs and E-learning in Indigenous Education

Kevin O'Connor, Mount Royal University

With the increase in land claim agreements, renegotiation of treaty rights and local control of resource development, many Indigenous² communities are engaging in the use of new media and information technologies in the process of self-determination. This direct control and involvement leads to issues of preservation and sustainable development of their resources. Education becomes a major factor in this process as many Indigenous communities support the inclusion of these technologies in the students learning:

- To encourage students to be aware of and feel responsible for the lands their ancestors have occupied.
- To assist in the intellectual, emotional and social development of students.
- To better prepare and encourage the students for employment opportunities that exist within Aboriginal territories and beyond.

Through this short issue paper, I investigate the use of information and communications technologies (ICTs) and e-learning in a First Nations education context and make the case for their educational, pedagogical and cultural benefits within a system that many believe is failing its students (AFN, 2005; Kirkness, 1998). As I describe some exemplary e-learning educational organizations, I believe that we are currently well situated within political, economic and social systems to increase support for ICTs and e-learning in First Nations education policy and programming at both the local and national levels.

Background

The current state of Indigenous education in Canada is unacceptable (AANDC, 2011; AFN, 2005). “The majority of Indigenous youth do not complete high school and rather than nurturing the individual, the present schooling experience typically erodes identity and self-worth” (*Royal Commission on Aboriginal Peoples*, 1996, p. 434).

The lack of Indigenous cultural knowledge and perspectives in the school curriculum has been identified as a significant factor in school failure amongst Indigenous students (Cajete, 1994; Deloria & Wildcat, 2001; Kirkness, 1998). The hideous legacy of residential school experience has had devastating

² “Indigenous” refers to the conditions, rights and way of life of many groups, cultures, communities and peoples who have a historical continuity or association with a given region or parts of a region before its subsequent colonization or the formation of a nation-state. I do not wish to insinuate by the use of a single reference that Indigenous people can be classified by one term that excludes each group’s specific and particular identity. I have learned that not only are there definite relations and nuances within Indigenous Nations, but that they are explicitly specific to each community and reserve. The historical specificity and variability of culture and its synchronous interaction with many other diverse environmental and social structures create specific identities amongst groups that are not to be trivialized by a single term.

effects on generations of Indigenous students. Cultural conflict, alienation, poor self-esteem, lack of preparation for jobs and for life in general and disengagement from schooling can be traced back to residential schools (Ing, 1990; McPeck, 1988; Swanson, 2003). This affects not only those directly associated with residential schools but their children, grandchildren and communities (Kirkness, 1999).

While it is not my intent to over-exemplify the challenges associated with Indigenous education, I am compelled to list some contributing factors, as it is often the case to “mislabel...the conditions of poverty as the conditions of culture and its incongruence with the school environment” (Clarke, 1997, p. 63). It is these very assumptions that blame the victim and assume that the cultural values of Indigenous people are what hinder their upward mobility into the relative affluence of society (Adams, 1998). Most specific to this issue, the wish is for the Aboriginal student to finally be in a position to take advantage of the opportunities provided by a healthy and well-supported educational system. Some of the current challenges are:

Socio-economic challenges

- Factors outside the classroom can account for 40–50% of a student’s performance.
- There are high levels of poverty, health issues including substance abuse and special needs and mobility on and off-reserve.

Historical challenges

- The legacy of assimilation, residential schools and the effects of the Indian Act remain pervasive challenge for Aboriginal peoples to contend with.
- Education is viewed by most First Nations as key to self-determination, with emphasis on local control and language and culture.

Systemic challenges

- Currently there is no legislative framework in place to support education on-reserve.
- K–12 education is delivered primarily within a stand-alone, “school house” model.
- Chronic funding pressures persist within each First Nations community in Canada.
- There is confusion in terms of assignment of roles and responsibilities between:
 - The federal government that funds education
 - Provincial governments that have the expertise in overseeing the delivery of education and
 - First Nations that deliver education services on-reserve (O’Connor, 2012).

Government of Canada’s role in First Nations education

The Government of Canada has primary responsibility for the elementary and secondary education of Status Indians living on-reserve. The following are some key statistics that provide some context to First Nations Education in Canada.

- There are 520 First Nations schools across Canada, often in remote, socio-economically challenged communities.
- Approximately 117 500 elementary/secondary First Nations students live on-reserve.
- Of these, approximately 40 percent attend provincial or private schools off-reserve for which the Government of Canada pays tuition fees through tuition agreements.
- In 2011–12 approximately \$1.5 billion in investments were allocated for First Nations K–12 education, plus about \$300 million for post-secondary education (O'Connor, 2012).

These findings reveal the complexity of education for Indigenous students. There is an urgency to develop alternative education approaches that incorporate Indigenous cultural knowledge and methodologies with on-reserve and public school curriculum, to enhance and support classroom learning for Indigenous students. There is also a need to discover effective ways that indigenous and non-indigenous (English and/or French) educators can integrate such cultural knowledge into their teachings of the regular curricula at formal schools (Barnhardt, 1999; Kanu, 2005; McCue, 2009).

ICTs and E-Learning

Certain alternative education practices offer solutions to some of the problems many Indigenous students face in formal educational institutions and have created positive outcomes with respect to Indigenous student needs (Grande, 2004; O'Connor, 2009). The use of ICTs and e-learning in Aboriginal education has shown positive results in addressing many of the aforementioned barriers to success for Aboriginal students (Industry Canada, 2005; Sharpe, D. et al, 2011; Vaughn, N. D., 2014). The following is a description of some of those benefits.

Benefits

Accessibility and Supports

Many First Nations schools exist in isolated and remote communities within Canada. This geographical separation can negatively impact educational programming, as there is often a lack of:

- Pedagogical supports.
- Learning resources.
- Availability of courses/schools (especially in secondary).
- Teacher professional development.

Opportunities provided through ICTs and e-learning can assist students in accessing the crucial supports required for learning that are equivalent to many in urban or less isolated school environments. Another positive element to this approach is that educators—many whom are not of Aboriginal descent and who do not have experience in Aboriginal education and/or

are new to the profession—can access the applicable supports and information to help them integrate culturally relevant and effective pedagogy in their classrooms. Critics often assume that Aboriginal schools are taught by Aboriginal teachers. This is often not the case as many Aboriginal schools (like many non-Aboriginal rural schools) attract beginning non-Aboriginal teachers looking to build their professional experience. ICTs and e-learning can provide positive cost-effective supports to both Aboriginal and non-Aboriginal teachers without having them leave their communities on a regular basis.

Another advantage in the application of ICTs and e-learning is that it allows students to remain in their respective communities to learn. Studies have consistently reinforced the fact that active family and community involvement does have a considerable impact on student achievement (Booth & Dunn, 1996; Epstein, 1995; Hoover-Dempsey & Sandler, 1997). The profound and comprehensive benefits for students when parents, family and community members become active participants in the educational process is undeniable (Diss & Buckley, 2005)

If Aboriginal students must leave their communities for schooling, they lose this crucial support, not to mention the cross-cultural challenges that can occur in a non-Aboriginal educational environment. Melnechenko and Horsman (1998) identify family influence as one of the major factors contributing to the educational success of Indigenous students: “Educators have come to know that there is a positive correlation between success at school and positive family influence, support, and relationships” (p. 9). A student with a strong sense of community and a rich understanding of his or her culture is someone who will be successful in school, remain in school longer and have a positive transition to the post-secondary world (Hampton, 1995; Jardine, 2005; Kirkness, 1998).

Indigenous Pedagogies

Aboriginal e-learning organizations can provide an experienced and supportive pedagogical approach that is grounded in Indigenous epistemologies that have the potential to engage students in the process of their learning. The current framework that guides our provincial schools is based upon colonial thought (Harding, 1998; Tuhiwai-Smith, 1999) and, I argue, places the learner in a recipient position which is contrary to many Aboriginal beliefs and epistemologies. Learners in our provincial schools are often seen as passive recipients of knowledge and teachers are purveyors of that knowledge (Goodlad, 1984; Sizer, 1984).

All too often young Aboriginal students who are full of creativity, curiosity and active wonderment enter the school environment and become submissive and passive participants, because they are led to believe that they must learn and act according to what the curriculum, their teacher and school reward them for learning and becoming (Jardine, 2005). Critical theorists (Greene, 1995; Tuhiwai-Smith, 1999) recognize that the present educational system places students as “passive receptors in a fact-based memory game” (Kincheloe, 2001, p. 90). They instead envision a system that teaches young people to become active participants in the world. It is only through dynamic engagement that we can see the relevance and necessity to learn about it.

Many Canadian-based Aboriginal e-learning organizations encourage students through introducing a multiple-perspective curriculum and active exposure to social, cultural and political issues in order to venture 'outside the box' of the conventional education system. Supported through a 'blended approach' (Driscoll, 2003), students are asked to develop beliefs that are based on their own critical assessment; differing opinions and ways of thinking are encouraged. Through student-centered learning initiatives and cooperative work, learners develop a cognition that values Aboriginal perspectives.

Skills and Training

ICTs and e-learning can effectively contribute to the economic opportunities available to Indigenous students and communities in general. With the availability of resources and aggressive development of those resources in Aboriginal territories, there has never been a more crucial time to provide a mode of training and knowledge management so as to support Aboriginal employability and community-based economic opportunities. Through skills development and vocational training, e-learning can provide the Aboriginal learner with the skills and knowledge for employment opportunities that exist within Aboriginal territories and beyond.

Current Providers

The now terminated First Nations SchoolNet FNS programme—originally housed within Industry Canada but later migrated to the suite of educational programmes supported through Aboriginal Affairs and Northern Development Canada AANDC—was responsible for connecting First Nations schools to the internet. Through the creation of First Nations Regional Management Organizations, the FNS programme addressed its connectivity agenda by providing each First Nations school with the necessary resources, such as computers, hardware, licenses, support services and other related infrastructure, to effectively connect online.

While at AANDC-Education, I was very fortunate to chair their national e-learning strategy consultations and as a result was privy to the insight shared by four of the most productive Aboriginal e-learning organizations in Canada, who benefited from the FNS programme. They include:

- Sunchild Cyber (AB)
- Wapaskwa Virtual Collegiate (MB)
- K-Net and their Keewaytinook internet High School KiHS (ON)
- Credenda (SK)

A summary of some of these findings include:

- Working definition developed: "E-learning is a method of quality education not readily available to students in the communities that allows each community to have their own school."
- All organizations stressed that they provide an educational service that is not currently provided (by band or provincial school) within Aboriginal communities.

- Retention rates have increased from 30–40% to 70–80%.
- Student success rates are 50–60%, which is much higher than most local band schools.
- Various funding models are currently being applied to support their organizations (federal, provincial, private and user fees).
- Recognition of the diverse (or conversely, lack of) arrangements and/or support currently in place with the individual organizations and their respective provinces
- Partnerships were seen as a priority to the schools' sustainability and were (and continue to be) created with various private organizations and post-secondary institutions
- Connectivity issues exist (urban vs. rural, cancellation of FNS programme).
- Consensus on a pedagogical approach that is considered "Blended E-Learning," a combination of asynchronous, synchronous and on-site engagement (applied in K–12, PSE & professional development contexts).

As we move forward, a report by the Conference Board of Canada (2010, p. iii) makes 11 recommendations worth considering to optimize the effectiveness of e-learning programmes and to improve on-reserve First Nations educational outcomes:

1. Better engage First Nations in the development and implementation of e-learning programmes.
2. Develop and implement an e-learning strategy.
3. Increase funding for e-learning programmes and the supporting software licensing, technical infrastructure, equipment and technicians.
4. Extend funding terms for e-learning programmes.
5. Assess community needs and educational outcomes.
6. Build tools and capacity.
7. Develop and implement a strategy to improve teacher engagement.
8. Consider the generational differences among students.
9. Promote student commitment.
10. Offer expanded and more flexible programmes with holistic programme delivery.
11. Better integrate e-learning under the overall AANDC education umbrella.

As the federal government continues to make significant investments in expanding broadband network services in First Nations communities (AANDC, 2012) and as it begins to enact its controversial bill on First Nations Education Reform (AANDC, 2013), there has never been a more critical time to increase support for ICTs and e-learning in First Nations education policy and programming at both the local and national levels. It is the hope that through this type of alternative education approach, Aboriginal students are finally in a position to take advantage of the opportunities provided by healthy and well-supported educational systems.

References

- Aboriginal Affairs and Northern Development Canada. (2011). *Nurturing the learning spirit of First Nation students: The report of the national panel on First Nation elementary and secondary education for students on reserve*. Ottawa, ON: Government of Canada.
- Aboriginal Affairs and Northern Development Canada. (2012). *Media room: News releases*. [Ref. #2-3620]. Retrieved from <http://www.aadnc-aandc.gc.ca/eng/1328879669831/1328879799768>
- Aboriginal Affairs and Northern Development Canada. (2013). *Working together for First Nation students: A proposal for a bill on First Nation education*. Ottawa, ON: Government of Canada. Retrieved from <https://www.documentcloud.org/documents/809165-native-education-reform-act-proposal.html>
- Adams, H. (1989). *Prison of grass: Canada from a Native point of view*. Saskatoon, SK: Fifth House.
- Assembly of First Nations. (2005). *First Nations educational action plan*. Ottawa, ON: Author.
- Barnhardt, C. (1999). Standing their ground: The integration of community and school in Quinhagak, Alaska. *Canadian Journal of Native Education*, 23(1), 100–116.
- Booth, A., & Dunn, J. (Eds). (1996). *Family-school links: How do they affect educational outcomes?* Mahwah, NJ: Erlbaum.
- Cajete, G. (1994). *Look to the mountain: An ecology of Indigenous education*. Durango, CO: Kivaki Press.
- Clarke, A. S. (1997). The American Indian child: Victims of the subculture of poverty or cultural discontinuity? In R. D. Taylor & M. C. Wang (Eds.), *Social and emotional adjustment and family relations in ethnic minority families*. Mahwah, NJ: Erlbaum.
- Conference Board of Canada (2010). *Report: Optimizing the effectiveness of e-learning for First Nations*. Ottawa, ON: Conference Board of Canada.
- Deloria, V., & Wildcat, D. R. (2001). *Power and place: Indian education in America*. Golden, CO: Fulcrum.
- Diss, R. E., & Buckley, P. K. (2005). *Developing family and community involvement skills through case studies and field experiences*. Upper Saddle River, NJ: Pearson Education.
- Driscoll, M. (2003). *Blended learning: Let's get beyond the hype*. IBM Global Services. Retrieved from http://www-07.ibm.com/services/pdf/blended_learning.pdf
- Epstein, J. L. (1995). School-family-community partnerships: Caring for the children we share. *Phi Delta Kappan*, 76, 701–712.
- Goodlad, J. I. (1984). *A Place called school: Prospects for the future*. New York: McGraw Hill.

- Grande, S. (2004). *Red pedagogy: Native American social and political thought*. Lanham, MD: Rowman & Littlefield Publishers Inc.
- Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco, CA: Jossey Bass.
- Hampton, E. (1995). Memory comes before knowledge. *Canadian Journal of Native Education*, 20, 46–54.
- Harding, S. (1998). *Is science multicultural? Postcolonialism, feminism, and epistemologies*. Bloomington, IN: University of Indiana Press.
- Hoover-Dempsey, K., & Sandler, H. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67, 3–42.
- Industry Canada. (2005). *Up and running: Use of ICT in First Nations schools*. Ottawa, ON: Government of Canada.
- Ing, R. N. (1990). *The effects of residential schools on Native child-rearing patterns*. Unpublished master's thesis, University of British Columbia.
- Jardine, G. M. (2005). *Foucault and education*. New York: Peter Lang.
- Kanu, Y. (2005). Teachers' perceptions of the integration of Aboriginal culture into the high school curriculum. *Alberta Journal of Educational Research*, 51(1), 50–68.
- Kincheloe, J. (2001). *Getting beyond the facts: Teaching social studies/social sciences in the twenty-first century*. New York: Peter Lang.
- Kirkness, V. J. (1998). Our peoples' education: Cut the shackles; cut the crap; cut the mustard. *Canadian Journal of Native Education*, 22(1), 10–15.
- Kirkness, V. J. (1999). Aboriginal education in Canada: A retrospective and a prospective. *Journal of American Indian Education*, 39(1), 14–42.
- McCue, H. (2009). *Report: Enhanced integration of ICTs and elearning within First Nations schools*. Ottawa, ON: Government of Canada.
- McPeck, G. (1988). *The grieving Indian. Intertribal Christian communications*. Ottawa, ON: National Indian Brotherhood.
- Melnechenko, L., & Horsman, H. (1998). *Factors that contribute to Aboriginal students' success in school in grades six to nine*. Regina, SK: Saskatchewan Education.
- O'Connor, K. (2009). *Puzzles rather than answers: Co-constructing a pedagogy of experiential, place-based and critical learning in Indigenous education*. Unpublished doctoral thesis, McGill University.

- O'Connor, K. (2012). *The state of Aboriginal education*. June 6, 2012, AANDC-Resolution and Individual Affairs Sector (RIAS) Extended Management Meeting, Ottawa, ON.
- Royal Commission on Aboriginal Peoples. (1996). *Report (5 vols.): Education & gathering strength*. Ottawa, ON: Government of Canada.
- Sharpe, D., Philpott, D., & Bourgeois, M. (2011). *A Pan-Canadian survey of e-learning for Aboriginal high school students*. St. Johns, NL: Killick Centre for E-Learning Research, Memorial University. Retrieved from http://www.mun.ca/killick/home/phase_2_aboriginal_report.pdf
- Sizer, T.R. (1984). *Horace's compromise: The dilemma of the American high school*. Boston, MA: Houghton Mifflin Company.
- Swanson, S. (2003). Motivating learners in Northern communities. *Canadian Journal of Native Education*, 27(1), 61–73.
- Tuhiwai-Smith, L. (1999). *Decolonising methodologies: Research and Indigenous peoples*. United Kingdom, England: Zed Books.
- Vaughan, N. D., Auger, N., Sacher, M., & Sacher, M. (2014). A blended approach to Canadian First Nations education: The Sunchild e-learning community. In L. Kyei-Blankson, & E. Ntuli, (Eds.). *Practical applications in blended learning environments: Experiences in K–20 education*. Hershey, PA: IGI Global.

First Nations High School Education on Canadian Reserves: An Alternative Approach

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Recently, there have been numerous reports in Canadian news agencies about the crisis in First Nations Education, especially on rural and remote reserves. Statistics Canada reported in 2012 that more than 60% of First Nations students on reserves drop out of high school. This is particularly disturbing given how quickly the First Nations population is growing in Canada – 20% growth nationwide between 2006 and 2011, compared with 5.2% for the rest of the population. 28% of Canada’s Indian, Métis and Inuit populations are now under 14 years of age, compared with 16.5% for non-Aboriginal populations.

Unfortunately, there are many barriers to completing high school for First Nations students on reserves. These include the absence of positive role models, poor housing, single parent families and high unemployment rates. In 2000, a group of solution-minded founders decided alternative methods were required to address these challenges in order to help students and established the SCcyber E-Learning Community programme (formerly Sunchild E-Learning Community), which combines high quality face-to-face and online learning support – a blended approach to learning. First Nations students are able to study at learning centres on their reserves, which are supervised by mentors who are familiar with the local culture. In addition, online teachers provide personalized ‘real-time’ tutorials through the use of a web-based conferencing system.

This combination of local mentors with online teachers has resulted in a significant increase in high school completion rates for the First Nations students enrolled in the SCcyber E-Learning Community programme. An evaluation study of this programme was conducted during the 2011–2012 school year. The Seven Principles of Effective Teaching (Chickering & Gamson, 1999) framework was used to conduct this programme evaluation. The study consisted of a mixture of quantitative and qualitative data collection methods. All students enrolled in the SCcyber E-Learning Community programme were invited to complete an online survey in the fall 2011 semester. Follow-up online interviews were conducted in December 2011 with four of the students who completed this survey. In the winter 2012 semester, these online interviews were expanded to include seven mentors, two online teachers and the principal of the programme. Two site visits were also conducted, to Chiniki Adult Education Center and the Calgary First Nations Futures Center.

The findings from the evaluation of the SCcyber E-Learning Community programme suggest that the key to academic success involves implementing a blended approach through the deliberate and intentional integration of mentors at local learning centers, combined with online teachers. The study participants emphasized how this blended approach helped First Nations students overcome major learning challenges such as living in remote locations, lack of access to digital technologies; high speed internet access and quality teachers. Framing the results through the lens of the Seven Principles of Effective Teaching (Chickering & Gamson, 1999) clearly demonstrates how this task is being accomplished.

Principle 1: Good Practice Encourages Student-Teacher Interaction

Synchronous and asynchronous communication technologies are being used by students in the SCcyber E-Learning Community to increase access to their online teachers and mentors, help them share useful resources and provide for joint problem solving and shared learning that is being combined with face-to-face mentoring at the learning centres. These communication technologies are strengthening online teacher interactions with all students, but especially with shy students who are reluctant to ask questions or challenge the teacher directly. These students find that it is often easier to discuss values and personal concerns in writing rather than orally, since inadvertent or ambiguous nonverbal signals are not so dominant.

The roles and responsibilities of the online teacher in this programme can become overwhelming. A recommendation has been made to have each of the online teachers log their daily activities for a one week period. Then, at one of the monthly team meetings the results can be shared and strategies developed for managing the workload of an online teacher in the SCcyber E-Learning Community.

Principle 2: Good Practice Develops Reciprocity and Cooperation among Students

The SCcyber E-Learning Community strategically works at creating a cooperative learning environment amongst students, parents, mentors and online teachers. The focus of the programme is on self-paced learning, but the study participants suggested that communication and information technologies could be used to support additional opportunities for study groups, collaborative learning, group problem solving and discussion of assignments.

In addition, many of the students and mentors emphasized how important it is to create a sense of community at the learning centres (i.e., displaying student work on the walls, creating a student council, creating a lunch and leisure space). A recommendation has been made to have senior mentors travel to new sites to help the new mentors establish their learning centres.

Principle 3: Good Practice Uses Active Learning Techniques

The range of technologies that the SCcyber E-Learning Community uses to encourage active learning is extensive. In the past, apprentice-like learning has been supported by many traditional technologies: libraries, laboratories, art and architectural studios, athletic fields. Newer digital technologies can now enrich and expand these opportunities – especially for those students located in rural and remote parts of Alberta and the Northwest Territories. For example, digital technologies can:

- Support apprentice-like activities in fields that require the use of technology as a tool, such as statistical research and computer-based music, or use of the Internet to gather information unavailable in the local library.
- Simulate scientific techniques, for example through helping chemistry students develop and practice research skills in “dry” simulated laboratories.

- Help students develop insight. For example, students may be asked to design a radio antenna. Simulation software not only displays students' designs, but also the ordinarily invisible electromagnetic waves the antennae would emit. Students change their designs and instantly see resulting changes in the waves. The aim of this exercise is not to design antennae, but to build a deeper understanding of electromagnetism.
- Many of the students enrolled in this programme also have their own mobile devices and a recommendation has been made to have them use these devices to document and record their learning in their local communities. For example, they could use their phones to take pictures and record videos that could then be used in the creation of digital stories for course assignments (Center for Digital Storytelling - <http://www.storycenter.org>).

Principle 4: Good Practice Gives Prompt Feedback

The combination of a learning center mentor and online teacher for each course ensures that all students enrolled in the SCyber E-Learning Community receive timely and regular feedback about their academic studies. Computers also have a growing role in recording and analyzing personal and professional performances. Teachers can use technology to provide critical observations for an apprentice; for example, they may use video to help a novice teacher, actor, or athlete critique his or her own performance. Teachers (or other students) can react to a writer's draft using the "hidden text" option available in word processors. Turned on, the "hidden" comments spring up; turned off, the comments recede and the writer's prized work is again free of "red ink."

In addition, as Alberta Education moves toward portfolio assessment strategies, computers can provide rich storage and easy access to student products and performances. Computers can keep track of early efforts, so teachers and students can see the extent to which later efforts demonstrate gains in knowledge, competence, or other valued outcomes. Performances that are time-consuming and expensive to record and evaluate— such as leadership skills, group process management, or multicultural interactions— can be elicited and stored, not only for ongoing critique but also as a record of growing capacity.

Principle 5: Good Practice Emphasizes Time on Task

The SCyber E-Learning Community programme allows students to work at their own pace in a safe environment with constant monitoring of their progress. The mentors and online teachers interviewed indicate that some students have problems completing their assignments in a timely fashion and thus, have to hastily complete a large portion of them at the very end of the semester. Strategies have been put in place to enforce regularly established deadlines that encourage students to spend time on task and help them avoid procrastination. These deadlines also provide a context for regular weekly contact with the mentors and online teachers.

Principle 6: Good Practice Communicates High Expectations

This programme does an excellent job of communicating high expectations and publicly praising students through the Wall of Success (a wall displaying student course completion certificates) at each learning centre. Communicating high expectations for student performance is essential. An additional way for teachers to do this is through giving challenging assignments. For example, teachers may assign tasks that require students to apply theories to real-world situations rather than remember facts or concepts. This case-based approach involves real world problems with authentic data gathered from real world situations.

Another way to communicate high expectations is to provide examples or models for students to follow, along with comments explaining why the examples are good. Teachers can provide samples of student work from a previous semester as models for current students. Additional commentary can be provided to illustrate how the examples met the required expectations. In addition, the online teacher can share examples of the types of interactions she or he expects in the discussion forum. For instance, a teacher may supply an exemplary posting and explain its strengths, as well as sharing an unsatisfactory posting and highlighting trends from the past that she or he would like students to avoid.

Principle 7: Good Practice Respects Diverse Talents and Ways of Learning

The SCcyber E-Learning Community clearly demonstrates how communication and information technologies can be used to support different methods of learning through the use of :

- Powerful visuals and well-organized text
- Direct, vicarious and virtual experiences; and
- Tasks requiring analysis, synthesis and evaluation, with applications to real-life situations.

These digital tools are also being used to encourage self-reflection and self-assessment. In addition, the range of technologies utilized in this programme help students learn in ways they find most effective and broaden their repertoires for learning. With the mentor and online teacher's support, these tools are supplying the structure for students who need it while leaving assignments more open-ended for students who don't. Students can move quickly through materials they master easily and go on to more difficult tasks, or slower students can take more time and get more feedback and direct help from the online teachers and mentors.

Finally, every SCcyber E-Learning Community student who participated in this study commented on the "passion and commitment" that the mentors, online teachers and administrators involved in this programme devoted to student success. They all emphasized that the SCcyber E-Learning Community was "making a difference in their lives." This enthusiasm for learning is definitely infectious and it is strongly recommended that more government departments, educational institutions and corporations partner with the programme in order to expand the positive impact on the lives of First Nations students in Canada.

The SCcyber E-Learning Community programme can now be accessed from over 25 learning centres in Alberta, the Northwest Territories and Ontario. Further information about the programme can be found at: <http://www.sccyber.net>

Reference

Chickering, A.W. & Gamson, Z.F. (1999). Development and adaptations of the seven principles for good practice in undergraduate education. *New Directions for Teaching & Learning*, 80, 75–82.

6. Individual Programmes

In addition to the provincial and territorial profiles, this study continues to survey all of the K–12 distance education programmes in Canada as comprehensively as possible. After an exhaustive Web-based search, discussions with Ministry of Education officials and other key stakeholders, a list of 251 individual programmes offering K–12 distance education was compiled.

Table 5. Summary of the number of K–12 distance education programmes/jurisdictions in survey

Province/Territory	Number of Programmes	Programmes Responding	Response Rate
NL	1	1	100%
NS	2	2	100%
PE	0	0	-
NB	2	2	100%
QC	3	3	100%
ON	82 ³	15	18%
MB	38 ³	2	5%
SK	21 ⁴	5	24%
AB	21	4	19%
BC	74	11	15%
YT	1	1	100%
NT	1	1	100%
NU	0	0	-
Federal	5	5	100%
Total	251	52	21%

Contact individuals at each of these programmes were sent a survey to obtain some general information about their programme and its level of activity (see Appendix B for a copy of the survey). As Table 5 indicates, the overall survey response rate was quite low.

There are several challenges with data collection for the individual programme survey. The first of these challenges is the time of year that the survey is issued. Once sponsors for this study are in place and ethics approval has been received, schools have already closed for the summer. Furthermore, the first weeks of a new school year are not an ideal time for data collection within the K–12 environment. The second challenge is focused on the ability to actually contact individuals in many of these

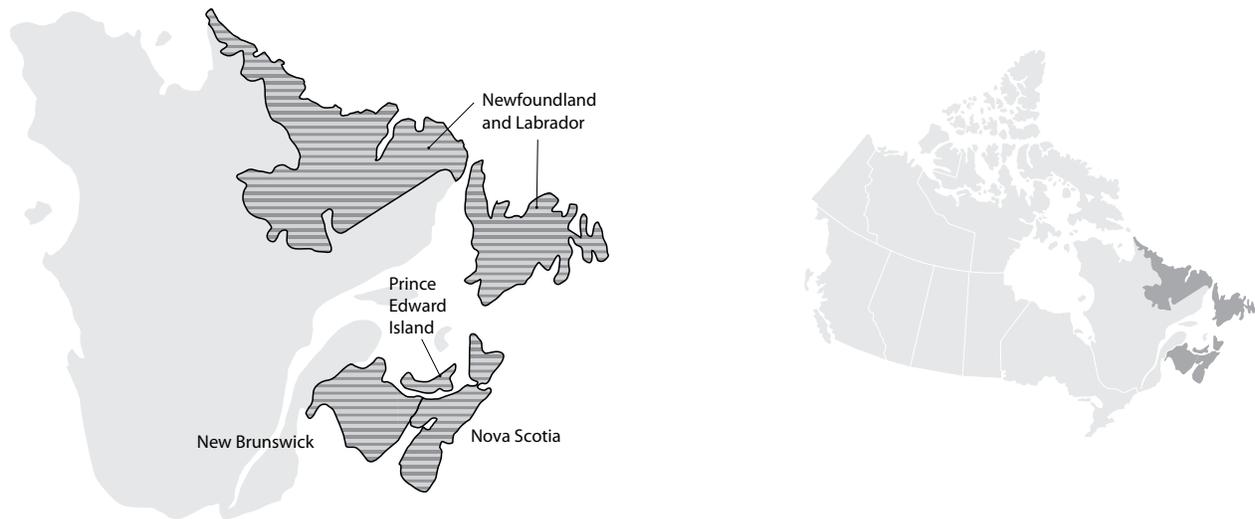
³ While each school district/division is believed to participate in distance education, several respondents indicated that they did not have a distance education programme.

⁴ There were 14 K-12 distance education programmes based on information provided by the Ministry, but an additional seven programmes have been found to exist.

programmes. As discussed earlier, there were 174 programmes that failed to respond in any of the three years that the individual programme survey was conducted.

Acknowledging these limitations, the following sections provide some basic information about each of the K–12 distance education programmes that responded. These sections are divided into the various Canadian regions and include a small commentary about each region.

6.1 Atlantic Canada



Atlantic Canada is the smallest geographic region of Canada, with each of the four provinces being among the smallest in the country. Atlantic Canada is also the only region where there are solely province-wide programmes providing distance education.

As the province-wide initiatives in Atlantic Canada are managed directly by the individual Ministries of Education, there is little legislative oversight in place to govern K–12 distance education, with the exception of Nova Scotia – where the teachers’ collective agreement provides codified regulation. New Brunswick also has a regulatory regime in the form of a policy handbook. All distance education programmes in Atlantic Canada participated in the individual program study.

Table 6. Description of the K–12 distance education programmes in Atlantic Canada for 2012–13

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Newfoundland and Labrador				
Centre for Distance Learning and Innovation (http://www.cdli.ca)	Online	1,232	36 full-time	40
Nova Scotia				
Nova Scotia Virtual School (http://nsvs.ednet.ns.ca)	Online	~700	9 full-time 1 part-time	
Nova Scotia Correspondence Study Program (http://csp.ednet.ns.ca)	Correspondence	~1,750	*	
New Brunswick				
New Brunswick – Anglophone (http://nbvhs.nbed.nb.ca)	Online	~1,600		
New Brunswick – Francophone (http://www.gnb.ca/0000/francophone-f.asp)	Online Correspondence	549	7 full-time 3 part-time	

* The Nova Scotia Correspondence Study Program utilizes markers on an as needed basis.

6.2 Central Canada



Central Canada is the most populated region of Canada. In fact, Ontario and Quebec comprise almost two-thirds of the population of Canada or approximately 20 million people or approximately 60% of the country's population (and only about a quarter of the area of the country). The vast majority of those people, around 17 million, live in the Quebec City to Windsor Corridor – a 1,200 km corridor running along the southern portions of both provinces that connects two ends of one of the main routes of the Via Rail passenger service. The corridor is the most densely populated and heavily industrialized region of Canada. The remainder of both provinces – the northern portions – are less populated and face many of the educational challenges one would expect in rural areas.

While Quebec has three distance education programmes that are all provincial in scope, Ontario is comprised of district-based initiatives. Most of the districts have joined one or more consortium to allow for regional or provincial cooperation. All three distance education programs in Quebec participated in the individual program study, while participation in Ontario was disappointingly low.

Table 7. Description of the K–12 distance education programmes in Central Canada for 2012–13

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Quebec				
Écoles éloignées en réseau / Remote Networked Schools (http://www.eer.qc.ca)	Online	~2,000	*	
Learn Quebec (http://www.learnquebec.ca)	Online Correspondence	350**	8 full-time 3 part-time	11
Société de formation à distance des commissions scolaires du Québec (http://www.sofad.qc.ca)	Correspondence	27,596***	****	365
Ontario				
Avon Maitland District eLearning Centre (http://www.amdec.ca)	Online	1,669	10 full-time 13 part-time	68

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Durham Catholic District School Board eLearning (https://durhamrc.elearningontario.ca)	Online	350	21 full-time 1 part-time	11
eLearning Consortium Canada (http://elccanada.ca)	Online	430	30 full-time	25
Grand Erie District School Board Virtual Academy (http://gecdsb.elearningontario.ca)	Online	167	7 full-time	7
Grand Erie District School Board eLearning Program (http://gedsb.elearningontario.ca)	Online Correspondence	1,849	13 full-time 44 part-time	30
Independent Learning Centre (http://www.ilc.org)	Correspondence Online	26,907	6 full-time 77 part-time	128
Kawartha Pine Ridge District School Board e-Learning (http://kprdsb.elearningontario.ca)	Online	~800	18 part-time	26
Limestone District School Board (https://ldsb.elearningontario.ca)	Online Correspondence	254	12 part-time	8
Ottawa-Carleton District School Board eLearning (http://www.ocdsb.ca/programs/sec/ol/elearning/Pages/default.aspx)	Online	~775	25 part-time	24
Quinte Adult Education (HPEDSB) (http://quinteadulteducation.ca)	Online Correspondence	2,100	1 full-time 22 part-time	160
Simcoe County District School Board eLearning (http://www.scdsb.on.ca/Programs/elearning)	Online	374	18 full-time	18
Waterloo Region District School Board e-Learning (https://wrdsb.elearningontario.ca)	Online	3,050	4 full-time 68 part-time	58
Virtual High School – Ontario (http://www.virtualhighschool.com)	Online	5,414	1 full-time 89 part-time	64
Virtual Learning Centre (http://www.virtuallearning.ca) / Open School Ontario (http://www.openschoolontario.ca)	Online	4,000	19 full-time 50 part-time	135

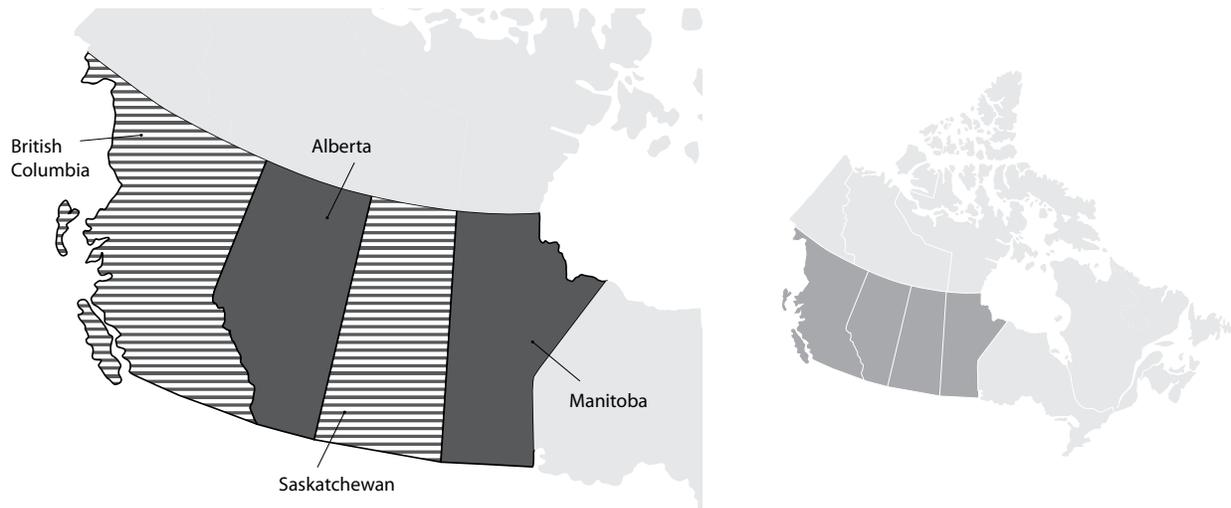
* Teachers are not hired by the school network.

** There are also 150,000 enrolments in the LMS for the asynchronous resources and the synchronous tutorials.

*** This is data for the 2010–11 school year.

**** Teachers are hired by the individual participating school boards and there is no programme-wide data available.

6.3 Western Canada



The Western Canada region has the second highest population of any region, with larger cities such as Vancouver, Victoria, Calgary, Edmonton, Saskatoon, Regina and Winnipeg. However, the non-urban areas of each of these provinces – particularly the northern portions – face the same geographic challenges that you would expect in any jurisdiction with a low population density.

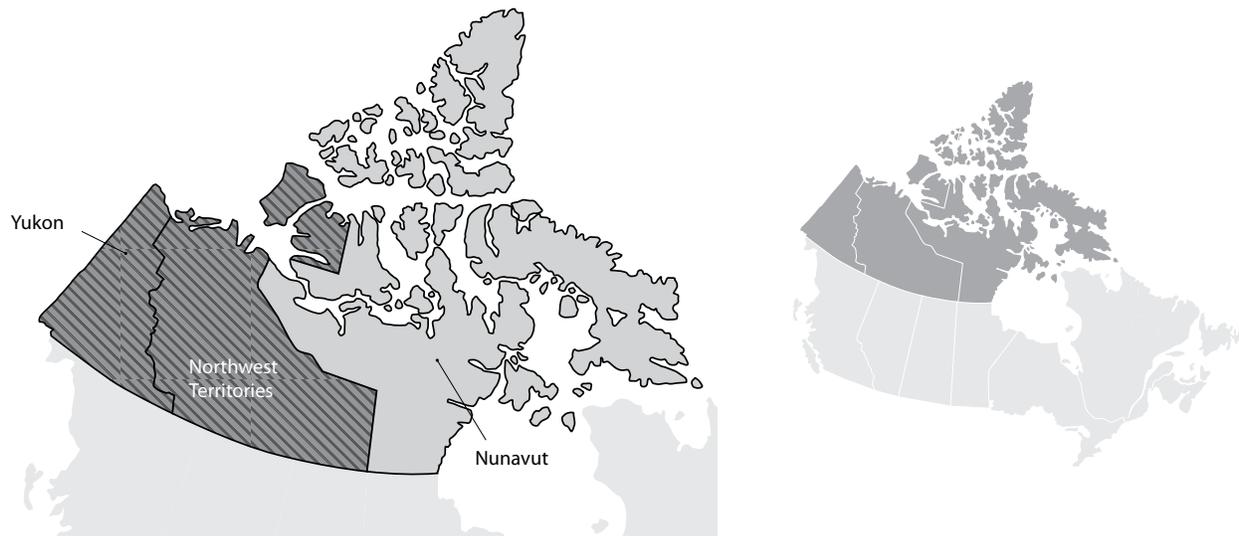
All four provinces in Western Canada have multiple K–12 distance education initiatives. In most instances these programmes are at the district-level, although Alberta and Manitoba still have active province-wide K–12 distance education programmes. The Western Canadian provinces have also been the most active in establishing legislative and regulatory regimes to govern K–12 distance education. The response rate from distance education programmes in all four Western Canadian provinces was quite low.

Table 8. Description of the K–12 distance education programmes in Western Canada for 2012–13

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Manitoba				
Southwest Horizon School Division VC (http://www.shmb.ca)	Online Video Conference	100		12
Saskatchewan				
Horizon School Division Distance Education & E-Learning (http://courses.hzsd.ca)	Online	251	17 part-time	21
Masinahikana Online School (http://edcentre.ca)	Online	447	5 full-time	29
Prairie South Virtual School (http://virtualschool.prairiesouth.ca)	Online	427	6 part-time	22
Saskatoon Catholic Cyber School (http://www.scs.sk.ca/cyber)	Online	2,000	3 full-time 23 part-time	49

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Sun West Distance Learning Centre (http://www.sunwestdlc.ca)	Online Correspondence	2,540	16 full-time 2 part-time	84
Alberta				
Alberta Distance Learning Centre (http://www.adlc.ca)	Online Correspondence	48,000	71 full-time	287
NorthStar Academy Canada (http://www.northstaracademycanada.org)	Online	271	6 full-time 1 part-time	80
Palliser Online School (http://www.pallisersd.ab.ca/online-school)	Online	56	1 part-time	
Rocky View Schools Online School (http://online.rockyview.ab.ca)	Online	1,414	12	75 courses
British Columbia				
Abbotsford Virtual School (http://avs34.com)	Online Correspondence	1,575	14 full-time 8 part-time	55 (gr 10–12), all subjects (K–9)
Diversity by Design DL Academy (http://diversitybydesign.ca)	Online Correspondence	100	2 full-time 7 part-time	~80
Ebus Academy (http://ebus.ca)	Online Correspondence	~3,000	31 full-time 4 part-time	65 (gr 10–12), ~20 (gr 8–9), all subjects (K–7)
Fraser Valley Distance Education School (http://www.fvdes.com)	Online Correspondence	~3,500	30 full-time 1 part-time	~150
Kamloops Open Online Learning (http://kool.sd73.bc.ca)	Online Correspondence	6,317	9 full-time 12 part-time	80
Learn@Home 8–12 (http://lah812.weebly.com)	Online Correspondence	1,780	7 full-time 11 part-time	~100
North Coast Distance Education School (http://ncdes.ca)	Online Correspondence	~3,400	8 full-time	65
Quesnel Distributed Learning School (http://qdlonline.com)	Online Correspondence	92 (gr 10–12) / 30 (gr K–9)	2 full-time 1 part-time	14 (gr 10–12), all subjects (K–7)
Rocky Mountain Distributed Learning School (http://getsmartbc.ca)	Online Correspondence	429	3 full-time 2 part-time	49
South Island Distance Education School (http://www.sides.ca)	Online Correspondence	~3,200	26 full-time 7 part-time	12 (gr 10–12), all subjects (K–7)
Traditional Learning Academy (http://www.schoolathome.ca)	Online Correspondence	934	22 full-time 40 part-time	130

6.4 Northern Canada



The Northern Canada region is geographically the largest in Canada; in fact, it includes about 40% of the total land mass of the country. However, less than 1% of the total population of Canada resides in one of these three territories (i.e., 0.3% to be precise). In addition to being a large, sparsely populated region, in a constitutional sense the three territorial governments do not enjoy the same legislative freedom as the provinces.

All three territories utilize the K–12 curriculum of one of the southern provinces. As jurisdictions without their own curriculum, it is natural that all three territories make use of K–12 distance education programmes located in the provinces with which they share a curriculum. However, both the Yukon and the Northwest Territories have K–12 local distance education programmes. All of the distance education programmes that were based in Northern Canada participated in this individual programme survey.

Table 9. Description of the K–12 distance education programmes in Northern Canada for 2012–13

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Yukon				
Aurora Virtual School (http://www.yesnet.yk.ca/virtual/aurora/index.html)	Online Video Conference	13	1 part-time	5
Northwest Territories				
Beaufort-Delta Education Council E-Learning (http://moodle.bdec.nt.ca)	Video Conference	100	6 full-time	6

6.5 Federal Jurisdiction



The federal Government, through Aboriginal Affairs and Northern Development Canada (AANDC), is responsible for the delivery of services to K–12 students on-reserve in seven federally-operated schools. AANDC covers funding for First Nations, Métis and Inuit children who live on-reserve but who attend regular schools off-reserve managed by provincial Ministries of Education. This accounts for approximately 60% of the 138,400 First Nations, Métis and Inuit on-reserve students across Canada.

There are five First Nations, Métis and Inuit K–12 distance education programmes across Canada – two in Ontario, one in Manitoba, one in Saskatchewan, and one in Alberta. Four of the five K–12 distance education programmes under federal jurisdiction participated in this individual programme survey.

Table 10. Description of the K–12 distance education programmes under Government of Canada jurisdiction for 2012–13

Programme/Jurisdiction	Medium	# of Students	# of Teachers	# of Courses
Ontario				
Gai Hon Nya Ni: The Amos Key Jr. E-Learning Foundation/Institute (http://www.amoskeyjr.com)	Online	75	4 full-time 2 part-time	36
Keewaytinook Internet High School (http://www.kihs.knet.ca)	Online Video Conference	297	18 full-time 1 part-time	64
Manitoba				
Wapaskwa Virtual Collegiate (http://www.wapaskwa.ca)	Online Video Conference	380	7 full-time	15
Saskatchewan				
Credenda Virtual High School (http://www.credenda.net)	Online	478	6 full-time 3 part-time	32
Alberta				
SCcyber E-learning Community (http://www.sccyber.net)	Online	650	1 full-time 7 part-time	85

7. Bibliography

- Alberta Teachers' Association. (2013a). *Stop funding CUTS to distance education*. Edmonton, AB: Author. Retrieved from <https://www.facebook.com/pages/Stop-funding-CUTS-to-Distance-Education/530818803628501>
- Alberta Teachers' Association. (2013a). *Cyber charter schools threaten education*. Edmonton, AB: Author. Retrieved from <https://www.teachers.ab.ca/Publications/ATA%20News/Volume-48-2013-14/Number-5/Pages/Cyber-charter-schools.aspx>
- Barbour, M. K. (2005a). Design of web-based courses for secondary students. *Journal of Open, Flexible and Distance Learning*, 9(1), 27–36. Retrieved from <http://journals.akoatearora.ac.nz/index.php/JOFDL/article/view/122>
- Barbour, M. K. (2005b). Perceptions of effective web-based design for secondary school students: A narrative analysis of previously collected data. *The Morning Watch*, 32(3–4). Retrieved from <http://www.mun.ca/educ/faculty/mwatch/win05/Barbour.htm>
- Barbour, M. K. (2007a). Portrait of rural virtual schooling. *Canadian Journal of Educational Administration and Policy*, (59). Retrieved from <http://www.umanitoba.ca/publications/cjeap/articles/barbour.html>
- Barbour, M. K. (2007b). Principles of effective web-based content for secondary school students: Teacher and developer perceptions. *Journal of Distance Education*, 21(3), 93–114. Retrieved from <http://www.jofde.ca/index.php/jde/article/view/30>
- Barbour, M. K. (2008). Secondary students perceptions of web-based learning. *Quarterly Review of Distance Education*, 4(9), 357–372.
- Barbour, M. K. (2009). *State of the nation: K–12 online learning in Canada*. Vienna, VA: International Association for K–12 Online Learning. Retrieved from www.inacol.org/cms/wp-content/uploads/2012/11/iNACOL_CanadaStudy_2009.pdf
- Barbour, M. K. (2010). *State of the nation: K–12 online learning in Canada*. Vienna, VA: International Council for K–12 Online Learning. Retrieved from http://www.inacol.org/cms/wp-content/uploads/2012/11/iNACOL_CanadaStudy_2010.pdf
- Barbour, M. K. (2011). *State of the nation: K–12 online learning in Canada*. Vienna, VA: International Council for K–12 Online Learning. Retrieved from http://www.inacol.org/cms/wp-content/uploads/2012/11/iNACOL_CanadaStudy_2011.pdf
- Barbour, M. K. (2012). *State of the nation: K–12 online learning in Canada*. Victoria, BC: Open School BC/Vienna, VA: International Council for K–12 Online Learning. Retrieved from http://www.openschool.bc.ca/pdfs/iNACOL_CanadaStudy_2012.pdf

- Barbour, M. K. (2013). The landscape of K–12 online learning: Examining what is known. In M. G. Moore (Eds.), *Handbook of distance education* (3rd ed.) (pp. 574–593). New York: Routledge.
- Barbour, M. K., & Adelstein, D. (2013). *Voracious appetite of online teaching: Examining labour issues related to K–12 online learning*. Vancouver, BC: British Columbia Teachers Federation. Retrieved from <http://www.bctf.ca/uploadedFiles/Public/Issues/Technology/VoraciousAppetite.pdf>
- Barbour, M. K., & Cooze, M. (2004). All for one and one for all: Designing web-based courses for students based upon individual learning styles. *Staff and Educational Development International*, 8(2/3), 95–108.
- Barbour, M. K., & Hill, J. R. (2011). What are they doing and how are they doing it? Rural student experiences in virtual schooling. *Journal of Distance Education*, 25(1). Retrieved from <http://www.jofde.ca/index.php/jde/article/view/725>
- Barbour, M. K., McLaren, A., & Zhang, L. (2012). It's not that tough: Students speak about their online learning experiences. *Turkish Online Journal of Distance Education*, 13(2), 226–241. Retrieved from https://tojde.anadolu.edu.tr/tojde47/pdf/article_12.pdf
- Barbour, M. K., & Mulcahy, D. (2004). The role of mediating teachers in Newfoundland's new model of distance education. *The Morning Watch*, 32(1). Retrieved from <http://www.mun.ca/educ/faculty/mwatch/fall4/barbourmulcahy.htm>
- Barbour, M. K., & Mulcahy, D. (2006). An inquiry into retention and achievement differences in campus based and web based AP courses. *Rural Educator*, 27(3), 8–12.
- Barbour, M. K., & Mulcahy, D. (2008). How are they doing? Examining student achievement in virtual schooling. *Education in Rural Australia*, 18(2), 63–74.
- Barbour, M. K., & Mulcahy, D. (2009). Student performance in virtual schooling: Looking beyond the numbers. *ERS Spectrum*, 27(1), 23–30.
- Barbour, M. K., & Rich, P. (2007). Social constructivist e-learning: A case study. *International Electronic Journal for Leadership in Learning*, 11(5). Retrieved from <http://iejll.synergiesprairies.ca/iejll/index.php/ijll/article/view/661>
- Barbour, M. K., Siko, J. (2012). Virtual schooling through the eyes of an at-risk student: A case study. *European Journal of Open, Distance and E-Learning*, 15(1). Retrieved from http://www.eurodl.org/materials/contrib/2012/Barbour_Siko.pdf
- Barbour, M. K., Siko, J., & Simuel-Everage, K. (2013). Pictures from an exhibition... of online learning: A creative representation of qualitative data. *The Qualitative Report*, 18(45), 1–15. Retrieved from <http://www.nova.edu/ssss/QR/QR18/barbour45.pdf>

- Barbour, M. K., Siko, J., Sumara, J., & Simuel-Everage, K. (2012). Narratives from the online frontier: A K–12 student’s experience in an online learning environment. *The Qualitative Report*, 17(20), 412–430. Retrieved from <http://www.nova.edu/ssss/QR/QR17-2/barbour.pdf>
- Barbour, M. K., & Stewart, R. (2008). *A snapshot state of the nation study: K–12 online learning in Canada*. Vienna, VA: North American Council for Online Learning. Retrieved from http://www.inacol.org/cms/wp-content/uploads/2012/11/NACOL_CanadaStudy_2008.pdf
- Canadian Teachers Federation. (2000). *Facts sheets on contractual issues in distance/online education*. Ottawa, ON: Author.
- Clements, J., & Gibson, D. (2013). *Delivery matters: Cyber charter schools and K–12 education in Alberta*. Edmonton, AB: Parkland Institute. Retrieved from http://parklandinstitute.ca/research/summary/delivery_matters
- Cooze, M., & Barbour, M. K. (2005). Learning styles: A focus upon e-learning practices and pedagogy and their implications for success in secondary high school students in Newfoundland and Labrador. *Malaysian Online Journal of Instructional Technology*, 2(1). Retrieved from <https://web.archive.org/web/20101011045558/http://pppjj.usm.my/mojit/articles/pdf/April05/02-Michael%20Barbour.pdf>
- Government of Newfoundland and Labrador. (2013). *Education statistics: Elementary and secondary 2012–13*. St. John’s, NL: Author. Retrieved from <http://www.ed.gov.nl.ca/edu/publications/k12/stats/index.html#1213>
- Haughey, M. (1999). *Pan-Canadian research options: New information technologies and learning*. Ottawa, ON: Canadian Education Statistics Council. Retrieved from http://www.cesc.ca/pceradocs/1999/99Haughey_e.pdf
- Haughey, M. (2002, May). *Canadian research on information and communication technologies: A state of the field*. A paper prepared at the Pan-Canada Education and Research Symposium, Montreal, QC. Retrieved from http://www.cesc.ca/pceradocs/2002/papers/MHaughey_OEN.pdf
- Haughey, M. (2005). Growth of online schooling in Canada. In C. Howard, J. Boettcher, L. Justice, K. Schenk, P. L. Rogers & G. A. Berg (Eds.), *Encyclopedia of distance learning*, (vol. 2, pp. 984–989). Hersey, PA: Idea Group, Inc.
- Haughey, M., & Fenwick, T. (1996). Issues in forming school district consortia to provide distance education: Lessons from Alberta. *Journal of Distance Education*, 11(1). Retrieved from <http://www.jofde.ca/index.php/jde/article/view/242/454>
- Haughey, M., & Muirhead, W. (1999). *On-line learning: Best practices for Alberta school jurisdictions*. Edmonton, AB: Government of Alberta.

- Haughey, M., & Muirhead, W. (2004). Managing virtual schools: The Canadian experience. In C. Cavanaugh (Ed.), *Development and management of virtual schools: Issues and trends* (pp. 50–67). Hersey, PA: Idea Group, Inc.
- Hawkey, C. & Kuehn, L. (2007). *BCTF research report - The working conditions of BC teachers working in distributed learning: Investigating current issues, concerns, and practices*. Vancouver: BC: British Columbia Teachers' Federation. Retrieved from http://www.bctf.ca/uploadedFiles/Publications/Research_reports/2007ei01.pdf
- Kuehn, L. (2002). *BCTF research report: Developments with distributed learning*. Vancouver: BC: British Columbia Teachers' Federation. Retrieved from <http://www.bctf.ca/publications/ResearchReports.aspx?id=5556>
- Kuehn, L. (2003). *BCTF research report: Distributed Learning in B.C., 2002–03*. Vancouver: BC: British Columbia Teachers' Federation. Retrieved from http://www.bctf.ca/uploadedfiles/publications/research_reports/2003ei02.pdf
- Kuehn, L. (2004). *BCTF research report: Online education is not the same as home schooling*. Vancouver: BC: British Columbia Teachers' Federation. Retrieved from <http://www.bctf.ca/publications/ResearchReports.aspx?id=8430>
- Kuehn, L. (2006). *BCTF research report: Distributed learning in British Columbia schools*. Vancouver: BC: British Columbia Teachers' Federation. Retrieved from <http://www.bctf.ca/publications/ResearchReports.aspx?id=9248>
- Kuehn, L. (2011). *BCTF research report: Personalized learning? Is there anything new in the Ministry of Education Service Plan for 2011–12?* Vancouver: BC: British Columbia Teachers' Federation. Retrieved from [http://www.bctf.ca/uploadedFiles/Public/Publications/ResearchReports/2011-EF-03\(1\).pdf](http://www.bctf.ca/uploadedFiles/Public/Publications/ResearchReports/2011-EF-03(1).pdf)
- Kuehn, L. (2013). *BCTF research report: Distributed learning enrolment in BC private schools grows rapidly—and public funding for private DL schools is boosted*. Vancouver: BC: British Columbia Teachers' Federation. Retrieved from <http://www.bctf.ca/uploadedFiles/Public/Publications/ResearchReports/RR2013-04rev.pdf>
- McRae, P. (2013). Rebirth of the teaching machine through the seduction of data analytics: This time it's personal. Edmonton, AB: Author. Retrieved from <http://philmcrae.com/2/post/2013/04/rebirth-of-the-teaching-maching-through-the-seduction-of-data-analytics-this-time-its-personal1.html>
- McRae, P., & Varnhagen, S. (2008). A study of teachers' workload in distributed learning environments: Flexibility, accessibility & permeable boundaries. Edmonton, AB: Alberta Distributed Education and Technology Association. Retrieved from <http://www.teachers.ab.ca/Publications/ATA%20Magazine/Volume%2092/Number-4/Pages/Teaching-any-time.aspx>

- Moe, T. M., & Chubb, T. M. (2009). *Liberating learning: Technology, politics and the future of American education*. San Francisco CA: Jossey-Bass.
- Muirhead, B. (1999). The benefits of an online education consortium for Alberta. *International Electronic Journal For Leadership in Learning*, 3(4). Retrieved from <http://iejll.synergiesprairies.ca/iejll/index.php/iejll/article/view/472>
- Peterson, Paul. (2010). *Saving schools: From Horace Mann to virtual learning*. Cambridge, MA: Belknap Press of Harvard University Press.
- Tunison, S., & Noonan, B. (2001). On-line learning: secondary students' first experience. *Canadian Journal of Education*. 26 (4). pp. 495–511. Retrieved from <http://www.csse.ca/CJE/Articles/FullText/CJE26-4/CJE26-4-Tunison.pdf>

8. Appendix A

Ministry of Education Survey

Please review the provincial or territorial profile from the 2012 edition of the *State of the Nation: K–12 Online Learning in Canada* report.

1. Have there been any changes in the legislative regime related to K–12 distance education?
2. Have there been any changes in the regulatory regime related to K–12 distance education?
3. Are there additional programmes, not mentioned in the 2012 report that should be included in an updated report?
4. How many students were involved in K–12 distance education during the 2012–13 school year?
5. Are there any additional issues related to K–12 distance education, not mentioned in the 2012 report that should be included in an updated report?
6. Is there any information in the 2012 report that you feel should be updated or revised?

9. Appendix B

K–12 Distance Education Programme Survey

1. What is the name of your K–12 distance education programme?
2. Describe the methods of delivery your K–12 distance education programme used in 2012–13.
Check all that apply.
 - Print materials
 - Audio graphics
 - Instructional television
 - Web-based/Online
 - Other:
3. How many students were enrolled in your K–12 distance education programme in 2012–13?
4. How many different courses did your K–12 distance education programme offer in 2012–13?
5. (a) How many full-time teachers were employed by your K–12 distance education programme in 2012–13?
6. (b) How many part-time teachers were employed by your K–12 distance education programme in 2012–13?
7. What is the website address for your K–12 distance education programme?
8. If there are any follow-up questions, who would be the best person for the researcher to contact?

Name:

Title:

E-mail address:

Telephone number:

10. Call for Sponsors for the 2014 State of the Nation: K–12 Online Learning in Canada Study

Canadian eLearning Network (CANeLearn) is seeking funding for the 2014 K–12 online learning study of Canada. If your organization is interested in participating through sponsorship by supporting the fifth annual *State of the Nation Study: K–12 Online Learning in Canada*, please contact Michael Barbour, principal investigator at mkbarbour@gmail.com, or Randy LaBonte, Executive Director of CANeLearn at rlabonte@CANeLearn.net.

Your participation as a sponsor helps support more widespread participation from virtual schools across the country in the K–12 Online Learning in Canada project and is an ideal opportunity to demonstrate your organization's interest in and commitment to supporting online and blended learning. Your company or organization will be recognized for its support of virtual schools seeking to effectively expand educational options for K–12 students across Canada.

CANeLearn is a new Canadian registered not-for-profit society. CANeLearn's mission is to provide leadership that champions student success by supporting organizations and educators involved in online and blended learning through networking, collaboration and research opportunities. CANeLearn provides members with networking, collaboration and research opportunities.

Please review the sponsor benefits and opportunities for the State of the Nation: K–12 Online Learning in Canada study:

- Recognition in all post-study press releases, presentations and distribution of information
- Opportunity to provide input into the programme survey
- Participate in project conference calls
- Project sponsor name and logo listed on all promotional materials
- Project sponsor name and logo listed on the final report
- Receive hard copies of the final report
- Receive Executive Summary of the final report for use on company website and for marketing purposes
- Receive recognition as a thought leader for cutting-edge research of K–12 online learning in Canada for sponsoring the research study
- Sponsor recognition during CANeLearn events highlighting the study

The plans for the 2014 study include updating the K–12 policy and activity reports for each of the provinces, a greater focus on some of the individual programmes within each jurisdiction (including more vignettes) and more issue papers examining specific issues in K–12 online learning in Canada written by individuals from a variety of sectors. Finally, the individual programme survey will be updated and expanded.

For-profit and non-profit institutions, organizations, individuals, foundations and companies are welcome to partner with CANeLearn for sponsoring the study. Please consider sponsorship of this important survey and report to be conducted annually. Your consideration is deeply appreciated.



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