



Funding and Resourcing of Distributed Learning in Canada

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Funding and Resourcing of Distributed Learning

Executive Summary

In Fall 2017, the Government of British Columbia (2017) began a review of the model that it uses to fund K-12 education. In the press release announcing the members of the review panel, the Government (2018a) described the goal of the review was “to find a better way to provide equitable and predictable funding to boards of education” (¶ 5). As a part of this review, the government panel released a discussion paper that stated, among other things, that there was “an artificial division in the current model between ‘bricks-and-mortar’ and distributed learning, which should not exist” (Government of British Columbia, 2018d, p. 3).

The purpose of this brief is to examine the nature of distributed learning funding in British Columbia and how that compares to other jurisdictions in Canada and the United States. This brief begins with an overview of the existing funding model in British Columbia with respect to distributed learning. This is followed by a description of how distributed learning is funded and resourced in other Canadian jurisdictions. The brief concludes with an exploration of the research literature related to funding distributed learning, most of which focuses on contexts in the United States.

This brief outlines how distributed learning funding models across Canada generally fall into one of three models. First, the government directly funds and/or resources distributed learning opportunities. Second, individual distributed learning programs charge a fee for students who enroll on a per course basis (often paid for by the school or school district). Third, the government provides direct funding for the distributed learning program through FTEs/CEUs. Interestingly, those Canadian jurisdictions that did fund distributed learning through FTEs/CEUs provided less funding for distributed learning enrollments compared to traditional brick-and-mortar enrollments.

The larger body of literature indicates that the American context generally follows the second for supplemental program and the third model for full-time programs. However, it is important to understand the role of private enterprise in public education with respect to distributed learning in the United States, and the impact this has on the funding of full-time distributed learning programs. There is also the issue of whether the government has the obligation to provide the same funding for public education regardless of the modality that education is delivered. As Ministries of Education across Canada review and revise funding models in their jurisdictions, issues of equity and access to effective learning options must be considered. Funding is a critical driver for educational practice. The research community would serve students and schools well to keep funding models for K-12 education in the forefront of their work.

Introduction

In Fall 2017, the Government of British Columbia (2017) began a review of the model that it uses to fund K-12 education. In the press release announcing the members of the review panel, the Government (2018a) described the goal of the review was “to find a better way to provide equitable and predictable funding to boards of education” (§ 5). In the terms of reference laid out for the review panel, the first main duty of the panel was to “review and provide feedback on a discussion paper and supporting materials (based on information gathered through initial fall engagement process)” (Government of British Columbia, 2018b, p. 1). According to the *K-12 Public Education Funding Model Review* website:

the Panel concluded stakeholder engagement which was primarily focused on K-12 sector stakeholders including Boards of Education, partner organizations, and school district management staff. Stakeholders provided written submissions, participated in surveys (i.e. Perspectives and Technical), and attended meetings with the panel (i.e. regional working sessions, one-on-one meetings. (Government of British Columbia, 2018c, § 4).

The panel’s discussion paper was released in May 2018.

One of the unique aspects of this funding review in British Columbia was the fact that the province has historically been a leader in K-12 distance or distributed learning. According to the annual *State of the Nation: K-12 e-Learning in Canada* reports (Barbour, 2009, 2010, 2011, 2012, 2013; Barbour & LaBonte, 2014, 2015, 2016, 2017; Barbour & Stewart, 2008), British Columbia has consistently had the highest number of students enrolled in distributed learning and the highest proportion of students involved in distributed learning (usually two to four times the national average). While the discussion paper released by the K-12 funding review panel focused primarily on how traditional brick-and-mortar education was funded, there was one reference to distributed learning. Under the section “Learning Transformation and Choice for Students,” the review panel wrote:

The current model of funding distributed learning (DL) is not working for most school districts. There is an artificial division in the current model between ‘bricks-and-mortar’ and DL, which should not exist, especially in the context of the new curriculum. (Government of British Columbia, 2018d, p. 3)

In short, despite having the highest proportion of student population involved in distributed learning, the funding model in place that likely led to this level of student engagement in distributed or distance learning has reportedly become a cause of concern for school districts. This observation may also reflect the growing trend towards blended learning, and a blurring of the lines between what truly is online learning (or distributed learning) and what is face-to-face learning that is supported by online tools, resources, and pedagogies.

Interestingly, the British Columbia Teachers’ Federation (2017) has also established a Task Force on Distributed Learning to examine a variety of issues related to distributed learning,

including funding and resourcing. While the task force is still in process, the British Columbia Teachers' Federation has an existing policy that advocates for:

Review policies and funding for Distributed Learning programs to create a system that is built on a co-operative, provincial basis, provides funding for provincial course development consistent with the curriculum changes, and has the resources to provide teaching conditions that are comparable to teachers in face-to-face programs. (§ 10)

The policy points to the importance of ensuring that the funding provides an equitable teaching situation between classroom and distributed teaching environments.

The purpose of this brief is to examine the nature of distributed learning funding in British Columbia and how that compares to other jurisdictions in Canada and the United States. This brief begins with an overview of the existing funding model in British Columbia with respect to distributed learning. This initial overview is followed by a description of how distributed learning is funded and resourced in other Canadian jurisdictions. The brief concludes with an exploration of the research literature related to funding distributed learning, most of which focuses on contexts in the United States. It should be noted that the term used to describe K-12 distance education in British Columbia is distributed learning. The use of this term varies across Canada and the United States, with most jurisdictions using distance education, online learning, or e-learning. Throughout this brief, whatever term is common in the jurisdiction being discussed will be used. Readers should remember that distributed learning, distance education, online learning, and e-learning are used synonymously throughout the brief. Similarly, the terms school and program are also used interchangeably.

Distributed Learning Funding in British Columbia

British Columbia is the only jurisdiction in Canada that “has significant provisions for the operation of e-learning programs in the *School Act* and *Independent School Act* as well as in provincial policy” (LaBonte & Barbour, 2018, pp. 606-607). Changes made to the *School Act* and *Independent School Act* in 2002 resulted in a system that funded distributed learning based on:

- continuous enrolment, rather than a single annual snapshot
- actual attendance to initiate an enrolment claim, rather than simple enrolment
- shift to course-based funding, beginning in grade 10 (Winkelmans, 2011, p. 25).

Students enrolled in kindergarten to grade nine either enrolled full-time in brick-and-mortar schooling or distributed learning. However, the “course-based funding model used to support grades 10 to 12 students does not generally impose a limit on the number of courses for which a student can be funded. Although a Full-time Equivalent (FTE) equates to eight full-year courses” (p. 25). This allows for a student in grade 10 through 12 to enroll in five courses from Brick-and-Mortar School A, two courses from Distributed Learning School B, and one course from Distributed Learning School C (see Table 1).

Table 1.

Sample enrollment of a fictional British Columbia student

School	Courses Enrolled	Proportion of the FTE
Brick-and-Mortar School A	5	5/8
Distributed Learning School B	2	2/8
Distributed Learning School C	1	1/8

As illustrated above, Brick-and-Mortar School A would receive 5/8 of the FTE, Distributed Learning School B 2/8 of the FTE, and Distributed Learning School C 1/8 of the FTE.

To add another level of complexity, British Columbia is also the only jurisdiction that has one FTE for brick-and-mortar enrollments and a different FTE for distributed learning enrollments. According to Barbour and LaBonte (2017), “during the 2016-17 school year, the basic allocation school-age equivalent for students attending a [public] brick-and-mortar school was \$7,218 (or \$902.25/course), while only \$6,030 (or \$753.75/course) for a student attending a distributed learning school” (p. 36). The province funds independent (i.e., private) distributed learning schools at up to 50 percent of the funding level provided to public schools (Winkelmans, Anderson, & Barbour, 2010).¹

Of note as well, the basic funding level for distributed learning is approximately 83.5% of the funding provided to brick-and-mortar enrollments. Table 2 extends the example above, and shows that our fictional student would generate \$4511.25 for Brick-and-Mortar School A, \$1507.50 for Distributed Learning School B, and \$753.75 for Distributed Learning School C.

Table 2.

Sample enrollment of a fictional British Columbia student

School	District	Courses Enrolled	Proportion of the FTE	Funding
Brick-and-Mortar School A	District 1	5	5/8	\$4511.25
Distributed Learning School B	District 2	2	2/8	\$1507.50
Distributed Learning School C	District 1	1	1/8	\$753.75

As all public distributed learning programs are operated by a school district, Table 2 provides the additional detail of which district each school is located in. Given the distributed learning FTE is funded at a lower amount, District 1 is economically disadvantaged by the fact that a student attending one of their brick-and-mortar schools is also enrolled in a course in their distributed learning school. This reality is why there are sometimes rumours that some schools and districts informally discourage students from enrolling in distributed learning courses, although any formal discouragement is against the *Schools Act* and provincial policy.

¹ Based on the current Independent School Regulation, the funding about is either 63% or 44.1%, depending on whether it is a Group 1 distributed learning independent school or a Group 2 distributed learning independent school (Government of British Columbia, 2014).

It is also important to note that, “individual e-learning programs must allocate internal resources for the development of their own course content and pay license and/or service fees for a learning management system to support distribution of the courses” (LaBonte & Barbour, 2018, p. 607). Some distributed learning programs have elected to participate in consortiums to help share the cost of resourcing. For example, the Consortium of Online Learning included distributed learning programs from four school districts that shared a learning management system and co-created online course content (LaBonte, 2005). More recently, the British Columbia Learning Network² is a consortium of school district distributed learning programs that work together to develop online course content. But it should be underscored that individual distributed learning programs in British Columbia must use the funding they receive from their FTE allocation to resource their programs regardless of their involvement in these consortiums.

Finally, British Columbia is one of the few jurisdictions that utilizes a continuous enrollment option for distributed learning (although not all distributed learning programs allow this option). According to Winkelmanns (2011):

For students in Kindergarten through grade 9:

- students reported Active as of September 30 receive the full FTE allocation
- new student counts reported as Active between the September and February receive 50% of the FTE allocation for support to the end of the school year
- new student counts reported as Active between the February and May generate 33.3% of the FTE allocation for support to the end of the school year

For students in grade 10 or higher, new courses are reported and generate the full course allocation (usually 0.125 FTE) for support to the end of the course, regardless of whichever school year or fiscal year that may fall in. (pp. 26-27)

Winkelmanns continued with a specific example of the continuous enrollment policy at the secondary level, he wrote:

Pat enrolls in an online chemistry course in late August and an online biology course the following April, and takes a year to complete each. Assuming the course statuses are Active by September and May respectively, the chemistry course will trigger 0.125 FTE funding in September and the biology course will trigger 0.125 FTE funding in May. Even though Pat is still in those courses the following school year, the distributed learning school may not claim new course funding again, unless Pat takes yet another course. (p. 27)

While continuous enrollment allows distributed learning schools flexibility to serve students with unique needs, it also creates additional administrative responsibilities for record keeping. For

² The British Columbia Learning Network has been rebranded as the Western Canada Learning Network, now that it has expanded to include distributed learning programs in Alberta and the Yukon.

students that continue their courses into the following school year, like Pat, the online teacher responsible for the student in the following school year is often not financially remunerated for that enrollment because the distributed learning school did not receive any funding for that student (Jamison & Barbour, 2018).

Distributed Learning Funding in Other Canadian Jurisdictions

While British Columbia is the only jurisdiction in Canada that employs a model where the funding follows the student, it is not the only jurisdiction that has a distinct funding model for distributed learning.

Alberta

According to Barbour and LaBonte (2017), Alberta Education also tracks and funds distance and online learning based upon the use of three specific codes schools enter into the student information system.

1. Schools may indicate on their annual operating plans that they offer an online program.
2. Courses may be identified as virtual and distance learning in provincial student information systems.
3. Students who are completing the majority of their courses online can be identified as such using the online learning student enrollment code. (p. 32)

It is the ‘a student in an online program (code 620)’ that generates the most interest, as “the *Funding Manual for School Authorities* prescribes funding mechanisms that are not available when a student is enrolled as an online learning student” (pp. 32-33). An examination of the *Funding Manual for School Authorities 2018/19* revealed the following qualifications of areas of FTE and credit enrolment units (CEU) funding where code 620 students receive different amounts than traditional brick-and-mortar students (FTE applies to students from early childhood services to grade 9, whereas CEU applies to students in grades 10 to 12).

Section 1.2: Grades 1-12 Base Instruction Funding

- “For regular courses submitted as complete (COM) or withdrawn (WDR) and delivered to students online or by distance learning, the attendance funding criteria may not apply (refer to 8b)”
 8. b) A regular course (non-career technology studies) submitted as COM or withdrawn WDR is considered completed for funding purposes when:
 - i. a student has earned a final mark of 50 per cent or greater in the course; or
 - ii. a student has earned a final mark of 25 per cent or greater but less than 50 per cent in the course, and has attended at least 50 per cent of the classes in the course or has worked on and been assessed on at least 50 per cent of the course content.When a student changes from one course to another within an academic program in the same term (e.g. student switches from Social Studies 10-1 to Social Studies

10-2), school authorities shall only claim one course for funding.” (Alberta Education, 2018, p. 17).

Section 1.6: English as a Second Language Funding (ESL)

Section 1.7: Francisation Funding (Francophone Regional Authorities only)

Section 1.11: Northern Allowance Funding

Section 1.14: Equity of Opportunity Funding

- “Funded students enrolled in home education, shared responsibility, outreach or online programs are not eligible for funding under this section.” (pp. 24-25 / p. 25 / p. 29 / p. 33)

Section 1.17: Plant Operations and Maintenance (School Jurisdictions)

- “The POM calculation is based on the following rates applied to the FTE Funded enrolment taken from the Frozen Funded Head Count of the previous year. For the purpose of this grant, a. a student in an online program (code 620) is not included” (p. 34)

Section 1.20: Rural Transportation Funding

Section 1.21: Urban Transportation Funding

- “5. Students in an online program or outreach program where they are accessing 50 per cent or more of their educational program at a school of the board or students in a shared responsibility program, that are transported by the board to a school, may be claimed as eligible passengers under Rural Transportation.” (p. 42 / p. 46)

Section 3.3: Severe Disabilities Funding Private Schools (including DSEPS) and Charter Schools

- “5. Students with severe disabilities enrolled in an online program, shared responsibility program or home education program are not eligible for severe disabilities funding.” (p. 59)

Section 3.10: Plant Operations and Maintenance Funding

- “3. For the purpose of this grant:
a) a student in an online program (code 620) is not included.” (p. 62)

Section 4.1: FNMI – Education Funding

- “6. Funded students enrolled in home education, shared responsibility or online programs are not eligible for funding under this section.” (p. 60)

Section 6.1: Regional Collaborative Service Delivery Funding (School Authorities)

- “1. b. Funded students enrolled in home education, shared responsibility, outreach or online programs are included in this allocation.
2. d. Funding is provided to RCSD regions for all funded children/students in school authorities including those enrolled in home education, shared responsibility, outreach or online programs.
Eligible Students X Regional Differential Modifiers Per Student Rate
3. Children and youth, who are registered with school authorities and First Nations schools in alternative programs such as home education, shared responsibility, outreach and online and children and youth with complex needs and/or a low incidence disability are eligible for supports and services through RCSD.” (pp. 71-72)

Section 8.2: Infrastructure Maintenance and Renewal – School Jurisdictions

- “2. The enrolment number for IMR is based on the FTE funded enrolment taken from the frozen funded head count of the previous year. For the purpose of this grant;
a. a student in an online program (code 620) is not included;” (p. 88)

As highlighted in these sections, in some cases an online student is only funded at a portion of the rate that a regular brick-and-mortar student is funded. However, in other cases funding is dependent on the actual course score a student has received in the online course or what proportion of the student’s programming is online. In terms of the actual course score a student has received in the online course, this references the completion-based funding that Alberta uses for all its educational funding (i.e., both brick-and-mortar and online). Finally, in some cases the funding area is simply not applicable to an online student. Interestingly, Barbour and LaBonte (2017) reported that “Alberta Education is aware that some schools and school authorities may not use the appropriate coding for distance and online courses” (p. 32), and the reduction of student funding may be a reason for this issue.

In addition to the funding a school may receive for individual students enrolled in online courses, it is also important to reference the funding requirements for online programs. For example, the *Funding Manual for School Authorities 2018/19* stated that:

Online Program

An education program offered by a school authority and delivered electronically to a student under the instruction and supervision of a certificated teacher of a board or accredited funded private school. The planning and implementation of instruction as well as the assessment of student learning in relation to the outcomes from the Alberta programs of study, is the responsibility of Alberta certificated teachers employed by the school authority. For full student funding, elementary and junior high students must have access to 950 hours of instruction and senior high students must have access to 1000 hours of instruction. ECS children cannot be enrolled in online programs. (p. 166)

This provision establishes requirements that school authorities must meet for their online learning program to be eligible for funding.

Finally, within the Alberta context it is important to reference the funding allocated to the Alberta Distance Learning Centre (ADLC) and the Centre francophone d'éducation à distance (CFÉD). At present, ADLC is funded through a “service agreement with Alberta Education with secured funding based on a fixed number of teachers to offer distance education services,” which allows “administrators at ADLC the ability to predict staffing and service levels they will offer to students in the province well in advance of a new school year” (LaBonte & Barbour, 2017, p. 12). Conversely, CFÉD is funded through a conditional grant from Alberta Education, which means “unless the conditions are met to the satisfaction of the funder... the funding is not guaranteed” (p. 12). In addition, the *Funding Manual for School Authorities 2018/19* specifically states that “courses taken through the ADLC are funded at 44 per cent of the respective tier rate” (p. 104). What this means is that “instead of 100% of CEU funding flowing to school authorities using ADLC services for secondary courses with funding for ADLC at 56% of CEU funding levels, 44% CEU funding flowed to school authorities with 56% continuing to ADLC” (Schmidt & Carbol Consulting Group Inc., 2014, p. 19). However, there is no such language in the *Funding Manual for School Authorities 2018/19* related to CFÉD, which must rely upon informal agreements with the four Alberta Francophone boards to access any CEU funding (personal communication, J. Mongrain, September 17, 2018).

Manitoba

In addition to differentiation of FTE or CEU funding, there are also other models that are used to fund and resource distributed learning across Canada. According to Barbour and LaBonte (2017)

For the most part, distance and learning options are funded in a manner similar to brick-and-mortar education with a few exceptions. Students enrolled in the [Independent Study Option] ISO are required to pay for each course registration, although for students attending a school within Manitoba it is at the school’s discretion whether the fees are reimbursed in full, in part, or not at all. There is a fee per seat that is collected for the [Teacher Mediated Option] TMO, and the consortium that operates this option has established a fee structure for both members and non-members. Finally, the InformNet Virtual Collegiate has established a fee structure that depends on the student’s residency and status. Students that reside within the governing school divisions are not charged fees, but students from outside of the school division – as well as homeschooling students and adult learners – are charged fees. (p. 28)

As a reminder, there are several different distance education options provided by Manitoba Education and Training.

The Independent Study Option (ISO) provides the school-age and adult learners to access a wide range of print-based distance learning courses from grades 8 to 12 that were developed by the Ministry (Barbour, 2009). Learners complete courses independently and at their own pace while having some access to a tutor/marker. The ISO fee structure is as follows:

- \$170 a ½ credit course for residents
- \$225 a 1 credit course for residents
- \$250 a ½ credit course for non-residents
- \$500 a 1 credit course for non-residents (personal communication, S. Magee, September 17, 2018)

In most cases non-resident students take the form of students with parents overseas.

The Teacher Mediated Option (TMO) use the print-based distance learning courses supplemented with audio teleconference classes hosted by an instructor for grades 9 through 12 students attending a school or an adult learning centre (Barbour, 2009). The TMO fee structure is as follows:

- Member: \$630 for a 1 credit course
- Non-member: \$710 for a 1 credit course
- plus course material fee of \$80.00 plus GST (personal communication, M. Klassen, September 17, 2018)

The TMO is currently operated by a consortium of participating school divisions under a Memorandum of Understanding (MOU) between the consortium members and Manitoba Education.

The Web-Based Course (WBC) Option or online courses developed by the Ministry and offered using a Ministry-funded learning management system (Barbour, 2009). The WBC option is free for teachers to use with their students (personal communication, S. Magee, September 17, 2018). In recent years, Manitoba Education and Training has also entered into a MOU with two entities within the province to provide virtual collegiate services (i.e., the Manitoba First Nations Education Resource Centre and the Pembina Trails and St. James-Assiniboia School Divisions) – similar to a province-wide online school (Barbour & LaBonte, 2016). At present, the program operated by the Pembina Trails and St. James-Assiniboia School Divisions (i.e., InformNet Virtual Collegiate) has the following fee structure:

- \$500 for a course (for students outside of St. James-Assiniboia and Pembina Trails School Divisions)
- \$200 for a summer school course (personal communication, S. Magee, September 17, 2018)

There was no information available on any fee structure for the Wapaskwa Virtual Collegiate operated by the Manitoba First Nations Education Resource Centre.

Ontario

While the multiple funding models for distance education in Manitoba are due to the different types of distance education available in that province, the combination of Ministry resources and fee structure is also common in other provinces. LaBonte and Barbour (2018)

wrote that in Ontario the “Ministry of Education – through e-Learning Ontario³ – provides digital course content for complete courses, as well as a learning management system to deliver that content to students on, for district-based e-learning programs for both Anglophone and Francophone students” (p. 607). In addition to online course content and a learning management system, the Ministry also provides funding for a Technology Enabled Learning and Teaching Contact in each school board that is responsible for assisting teachers, schools, and the school board in using the Ministry’s resources for both online and blended learning (Barbour & LaBonte, 2017). Within this environment school boards maintain their own e-learning programs using these Ministry resources to provide opportunities for their own students. If the board wishes to enroll students from other boards in their own e-learning program, the sending board should transfer a fee of \$769 per credit course to the receiving board.⁴

Saskatchewan

The main difference between the funding mechanism in Saskatchewan, and what is described above for Ontario, is the resources provided by the Ministry of Education. In 2009, the Saskatchewan Ministry of Education completed the devolution of distance learning services from the Ministry to the school division (Barbour, 2009). Beginning with the 2009-10 school year, there were two years of bridge funding provided by the Ministry for school divisions to develop their own distance learning capacity, which has since ceased. The intent of this bridge funding was to allow school divisions the necessary initial investment for online course development and teacher professional development, which would allow them to offer their own distance learning program. Since the end of that bridge funding, the Ministry has not provided funding for distance learning enrolments (i.e., distance learning enrolments are funded at the school division level the same way a brick-and-mortar enrolment is funded). Based on information obtained from the *Saskatchewan Distance Education and Summer School Courses Repository*, most school divisions charge a fee of \$400 to \$500 per distance education course and \$100 for summer school course to students from school divisions other than the provider (i.e., a student from Regina who enrolls in a distance learning course from the Sun West School Division’s Distance Learning Centre).⁵

Rest of Canada

Similar to the Manitoba and Ontario models, there are several other jurisdictions where the Ministry of Education provides direct resourcing for distributed learning programs. However, these remaining jurisdictions do not charge any fee to access their distributed learning programs. For example, prior to being devolved to the Newfoundland and Labrador English School District, the provincial government funded the administration, all teacher and staff salaries, course development activities, Internet/network connectivity costs for schools, K-12 technology integration for the provincial K-12 school system in support of the Centre for

³ See <http://www.edu.gov.on.ca/elearning/>

⁴ It should be noted that in Ontario there are “three consortia... formed to support the equitable access to e-learning courses and services across their member school boards while avoiding the duplication of efforts” (LaBonte & Barbour, 2018, p. 609). Boards that participate in these consortia generally waive the course fee for other boards that participate in the same consortium.

⁵ See <https://www.skdistancelearning.ca/> to view the *Saskatchewan Distance Education and Summer School Courses Repository*.

Distance Learning and Innovation (i.e., the province-wide online learning program). Similar processes existed in New Brunswick and Nova Scotia, where online distance learning programs are operated as units within or funded by the Ministries of Education and Early Childhood Development. In fact, the remainder of provinces and territories – as well as those distributed learning programs that fall under federal jurisdiction – are funded and resourced in the same manner, with no differentiation to traditional brick-and-mortar students.

Existing Literature into Distributed Learning Funding

The general literature related to the funding of distributed learning is quite scarce, and almost exclusively about K-12 online learning in the United States. One of the first examinations of funding of supplemental K-12 online learning (i.e., those that serve students attending a brick-and-mortar school, but enrolled in one or more online courses) in the literature was conducted on the Florida Virtual School (FLVS). At the time the FLVS was funded based upon the student enrollment, similar to a traditional school district in the state, where the FLVS received 0.0834 of the FTE for each half-credit; six full credits per semester generated full-time funding (similar to the model used in British Columbia, just with different funding amounts). The only difference between the FLVS and a traditional public school district was that the FLVS only received the funding if the student successfully completed the course. The Florida TaxWatch Center for Educational Performance and Accountability (2007) conducted an audit of the cost effectiveness of the FLVS. The auditors concluded that it was \$284 more cost effective in 2003-04, and \$1048 more cost effective in 2006-07. Research conducted by Barbour (2012b) found that most supplemental K-12 online learning programs were funded, at that time, using a combination of state government block grants and per course enrollments fees that ranged from \$100 to \$500 per course. In most cases, the brick-and-mortar school or school district that the student attended paid for these fees (similar to the model used in Ontario, Saskatchewan, and many of the Manitoba options).

However, it is important to note that the majority of this literature is focused on the funding of full-time online learning, specifically cyber charter schools (i.e., public schools created based on a written contract or charter, which are free of many of the regulations imposed on traditional public schools). For example, Patrick, Myers, Silverstein, Brown, and Watson (2015) described the amount of funding that full-time online schools received, the proportion that amount represented in comparison to brick-and-mortar charter schools, the proportion that amount represented in comparison to traditional brick-and-mortar schools, and the average amount of funding traditional brick-and-mortar students received (see Table 3).

Table 3.

Funding of online schools compared to traditional schools in select states

State	2012-13 fully online school FTE funding	Online school funding compared to funding for brick-and-mortar charter schools	Online school funding as a percentage of average state funding for traditional brick-and-mortar schools	Average per pupil spending in traditional schools across the state
Arizona	\$5,759	95%	72%	\$7,968
California	\$6,468	100%	70%	\$9,300
Colorado	\$6,462	92%	72%	\$8,926
Florida	\$5,182	81%	81%	\$6,393
Georgia	\$4,334	100%	46%	\$9,432
Indiana	\$5,245	87.5%	55%	\$9,479
Iowa	\$6,001	100%	62%	\$9,748
Kansas	\$4,030	100%	40%	\$9,972
Louisiana	\$8,395	100%	90%	\$10,701
Minnesota	\$8,807	100%	100%	\$8,807
Nevada	\$6,700	100%	80%	\$8,376
Ohio	\$5,745	92%	51%	\$11,224
Oregon	\$6,304	100%	68%	\$9,268
Pennsylvania	\$8,992	100%	71%	\$12,729
Wisconsin	\$6,445	100%	56%	\$11,453
Wyoming	\$6,500	100%	43%	\$15,232

Proponents of cyber charter schooling have long argued that it should be funded at equal levels to brick-and-mortar education (Anderson, Augenblick, DeCescre, & Conrad, 2006; Hausner, 2004; Watson & Gemin, 2009).

In terms of the actual costs of cyber charter schooling, almost all the evidence has found that full-time online learning costs less than traditional brick-and-mortar instruction. The actual amount less has varied based on the literature. For example, the Ohio Legislative Committee on Education Oversight (2005) reported that the actual cost of the five existing cyber charter schools in the state were able to operate with 65% of the funding provided to traditional public brick-and-mortar schools. Similarly, Dodd (2010) reported a cyber charter school was able to meet Annual Yearly Progress with 65% of the funding provided to traditional schools, Gillis (2010) found another cyber charter school was able to operate at 65% of traditional funding. However, Barbour (2012b) concluded that it only cost between 7% to 16% less to operate one district-based full-time online learning program compared with a traditional school classroom-based program. It is interesting to note the difference in the pattern between the literature on funding cyber charter schools, all of which were operated by educational management organizations (EMO), and a district-operated cyber charter school. Many have suggested that the fiscal efficiency found in this literature is due to the fact that most of these EMOs are private, for profit corporations (Molnar, Huerta, Barbour, Miron, Shafer, Gulosino, 2015; Molnar, Rice, Huerta, Shafer, Barbour, Miron, Gulosino, Horvitz, 2014; Ravitch, 2010, 2013).

It is important for those outside of the American context to understand the role of private enterprise in public education with respect to K-12 online learning, and the literature around funding cyber charter schooling (Barbour, 2017). As Horn (2013) indicated, the core business of these corporate organizations has been running these cyber charter schools. This business model is based on fiscal efficiency – where operating expenses for a company with 11,000 students is approximately \$7,500/student, but that figure decreased to less than \$5,000/student when the company grows to an overall enrollment of 100,000 students. Ironically, even the Thomas B. Fordham Institute, a strong proponent of cyber charter schools, reported that full-time online schools were between 51% and 77% of the cost of brick-and-mortar schools (Butler Battaglini, Haldeman, & Laurans, 2012). Essentially, there is general agreement based on the literature that in the United States full-time online schooling costs approximately 35% less than traditional public schooling. However, it is important to underscore that this literature is presented against the backdrop of a corporate and profit-driven structure that exists in the United States online learning context. Unfortunately, beyond the Canadian examples presented above, the American context is the only example available.

Summary

This examination of distributed learning funding models across the Canadian landscape revealed three funding patterns.

1. Direct government funding and/or resourcing of distributed learning opportunities.
2. A fee structure for students who enroll on a per course basis.
3. Direct funding through FTEs/CEUs.

In many of the examples described above, the individual jurisdiction actually made use of some combination of two of these three patterns. Additionally, those Canadian jurisdictions that did fund distributed learning through FTEs/CEUs provided less funding for distributed learning enrollments compared to traditional brick-and-mortar enrollments.

The larger body of literature, all of which focused on the United States, revealed two of these three funding models for distributed learning: a fee structure for students who enroll on a per course basis, and direct funding through FTEs/CEUs. Similar to the Canadian experience, most jurisdictions that utilized a direct funding through FTEs/CEUs model also provided less funding for distributed learning enrollments. However, it should be noted that instances these US-based where the direct funding through FTEs/CEUs model was used were also instances where the operator of the distributed learning program was generally a for profit corporation.

There is also the broader issue of whether distributed learning should be funded at different or lower rates at all. While it appears to be more cost efficient, the literature does not confirm this. In examining the impact of online education on public education, Fulton and Kober (2002) wrote:

Less attention is paid to how these changes [i.e., the introduction of distributed learning] could affect the deeper purposes and principles underlying the... system of public

education—in other words, the expectations and ideals that have shaped the... vision of public education for more than a century. These include such purposes as preparing students for life, work, and citizenship, and creating a cohesive society; and such principles as providing universal access and equity in education, and making schools responsive to their local community. (p. 1)

Public education is funded by the taxpayers and the taxpaying parents of students who are enrolled in distributed learning – regardless of jurisdiction – do not receive a discount on the taxes they pay. The amount of their tax dollars that are allocated to public education is a fixed amount, regardless of the format that their children receive their education. It is a valid question to ask if these students who receive an education that may cost less are being provided with less service for their tax dollar. Additionally, even if a school can provide an equivalent distributed learning experience at 75% of the FTE provided for face-to-face instruction, the question of how much better that distributed learning experience could be if it received the full FTE funding has not been asked. This is not necessarily to argue that distributed learning should be funded at the same level or in the same manner as brick-and-mortar education, the moral question should be raised of whether students are disadvantaged by the fact that the form of schooling that they have chosen – for whatever reason – is funded at a discounted rate.

As Ministries of Education across Canada review and revise funding models in their jurisdictions, issues of equity and access to effective learning options must be considered. This summary of funding models across Canada and outside of Canada is only one part of the process that must be undertaken. The input from the educators responsible for these programs also must be heard to ensure that contextual elements and restrictions are part of the review processes. Funding is a critical driver for educational practice. The research community would serve students and schools well to keep funding models for K-12 education in the forefront of their work.

References

- Alberta Education. (2018). *Funding manual for school authorities 2018/19 school year: For school jurisdictions, accredited funded private schools and private ECS operators with students/children in ECS to grade 12*. Edmonton, AB: Author. Retrieved from <https://education.alberta.ca/media/3739782/2018-19-funding-manual.pdf>
- Anderson, A., Augenblick, J., DeCescre, D., & Conrad, J. (2006). *20/20 costs and funding of virtual schools*. Atlanta, GA: BellSouth Foundation. Retrieved from <http://www.charterschooltools.org/tools/Costs&Funding.pdf>
- Barbour, M. K. (2009). *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/resource/state-of-the-nation-k-12-online-learning-in-canada-2009/>
- 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/resource/state-of-the-nation-k-12-online-learning-in-canada-2010/>
- 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/resource/state-of-the-nation-k-12-online-learning-in-canada-2011/>
- Barbour, M. K. (2012a). *State of the nation: K-12 online learning in Canada*. Victoria, BC/Vienna, VA: Open School BC/International Council for K-12 Online Learning. Retrieved from http://www.openschool.bc.ca/pdfs/iNACOL_CanadaStudy_2012.pdf
- Barbour, M. K. (2012b). Point: Virtual schools are more cost-effective compared to traditional, brick-and-mortar schools. In K. P. Brady (Ed.), *Technology in Schools: Debating Issues in American Education* (pp. 84-90). Thousand Oaks, CA: Sage.
- Barbour, M. K. (2013). *State of the nation: K-12 online learning in Canada*. Victoria, BC: Open School BC. Retrieved from http://www.openschool.bc.ca/pdfs/state_of_nation-2013.pdf
- Barbour, M. K. (2017). K-12 online learning and school choice: Growth and expansion in the absence of evidence. In R. A. Fox & N. K. Buchanan (Eds.), *School Choice: A Handbook for Researchers, Practitioners, Policy-Makers and Journalists* (pp. 421-440). New York: John Wiley & Sons Ltd..
- Barbour, M. K., & LaBonte, R. (2014). *Abbreviated state of the nation: K-12 online learning in Canada*. Cobble Hill, BC: Canadian E-Learning Network. Retrieved from <http://k12sotn.ca/wp-content/uploads/2016/09/StateOfTheNation2014.pdf>

- Barbour, M. K., & LaBonte, R. (2015). *Abbreviated State of the nation: K-12 e-learning in Canada*. Cobble Hill, BC: Canadian E-Learning Network. Retrieved from <http://k12sotn.ca/wp-content/uploads/2016/09/StateOfTheNation2015.pdf>
- Barbour, M. K., & LaBonte, R. (2016). *State of the nation: K-12 e-learning in Canada*. Cobble Hill, BC: Canadian E-Learning Network. Retrieved from <http://k12sotn.ca/wp-content/uploads/2016/12/StateNation16.pdf>
- Barbour, M. K., & LaBonte, R. (2017). *State of the nation: K-12 e-learning in Canada*. Cobble Hill, BC: Canadian E-Learning Network. Retrieved from <http://k12sotn.ca/wp-content/uploads/2018/02/StateNation17.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/resource/state-of-the-nation-k-12-online-learning-in-canada-2008/>
- British Columbia Teachers' Federation. (2017). *BCTF task force on distributed learning (DL)*. Vancouver, BC: Author. Retrieved from <https://bctf.ca/IssuesInEducation.aspx?id=47273>
- Butler Battaglino, T., Haldeman, M., & Laurans, E. (2012). *The costs of online learning*. Washington, DC: The Thomas B. Fordham Institute. Retrieved from http://edex.s3-us-west-2.amazonaws.com/publication/pdfs/20120110-the-costs-of-online-learning_7.pdf
- Dodd, (2010, August 19). Cyber charter schools celebrate two state victories, may get more funds. *Atlanta Journal-Constitution*.
- Florida TaxWatch Center for Educational Performance and Accountability (2007). *Final report: A comprehensive assessment of Florida Virtual School*. Tallahassee, FL: Author. Retrieved from <https://www.inacol.org/wp-content/uploads/2015/02/final-report-a-comprehensive-assessment.pdf>
- Fulton, K., & Kober, N. (2002). Preserving principles of public education in an online world. Washington, DC: Center on Education Policy. <https://www.cep-dc.org//displayDocument.cfm?DocumentID=143>
- Gillis, L. (2010). *Virtual schooling*. A webinar presentation to Classroom 2.0. Retrieved from <http://www.stevhargadon.com/2010/02/lisa-gillis-on-virtual-schooling.html>
- Government of British Columbia. (2014). *Distributed learning – Independent schools*. Victoria, BC: Author. Retrieved from <https://www2.gov.bc.ca/gov/content/education-training/administration/legislation-policy/independent-schools/distributed-learning-independent-schools>
- Government of British Columbia. (2017). *B.C. education funding model review*. Victoria, BC: Author. Retrieved from

https://www2.gov.bc.ca/assets/gov/education/administration/resource-management/k12funding/funding-model-review/education_funding_model_timeline.pdf

- Government of British Columbia. (2018a). *Finding a better way to support school districts, student success*. Victoria, BC: Author. Retrieved from <https://news.gov.bc.ca/releases/2018EDUC0004-000306>
- Government of British Columbia. (2018b). *Terms of reference: Independent review panel for the K-12 public education funding allocation system review expected results for the period February 14, 2018 – August 31, 2018*. Victoria, BC: Author. Retrieved from <https://www2.gov.bc.ca/assets/gov/education/administration/resource-management/k12funding/funding-model-review/funding-model-review-independent-terms-of-reference.pdf>
- Government of British Columbia. (2018c). *K-12 public education funding model review*. Victoria, BC: Author. Retrieved from <https://www2.gov.bc.ca/gov/content/education-training/administration/resource-management/k-12-funding-and-allocation/k-12-public-education-funding-model-review>
- Government of British Columbia. (2018d). *Independent review panel – Report out on what we heard from school districts*. Victoria, BC: Author. Retrieved from https://www2.gov.bc.ca/assets/gov/education/administration/resource-management/k12funding/funding-model-review/stakeholder-perspectives-and-reports/independent_review_panel_what_we_heard.pdf
- Hausner, L. (2004). *Estimated cost of operating a cyberschool in Colorado*. Denver, CO: Donnell-Kay Foundation.
- Horn, M. B., & Stalker, H. (2015). *Blended: Using disruptive innovation to improve schools*. San Francisco, CA: Jossey-Bass.
- Jamison, J., & Barbour, M. K. (2018, April). *Direction of distributed learning in BC: A BCTF perspective*. A presentation at the British Columbia Digital Learning Conference, Richmond, BC.
- LaBonte, R. (2005). *Leadership and educational technologies: Leading the charge for e-learning in British Columbia schools*. Vancouver, BC: University of British Columbia. Retrieved from <https://open.library.ubc.ca/cIRcle/collections/ubctheses/831/items/1.0055629>
- LaBonte, R., & Barbour, M. K. (2018). An overview of elearning organizations and practices in Canada. In K. Kennedy & R. E. Ferdig (Eds.), *Handbook of research on K-12 online and blended learning* (2nd ed., pp. 601-616). Pittsburgh, PA: ETC Press. Retrieved from https://figshare.com/articles/Handbook_of_Research_on_K-12_Online_and_Blended_Learning_Second_Edition_/6686813

- Molnar, A. (Ed.); Huerta, L., Barbour, M. K., Miron, G., Shafer, S. R., Gulosino, C. (2015). *Virtual schools in the U.S. 2015: Politics, performance, policy, and research evidence*. Boulder, CO: National Education Policy Center. Retrieved from <http://nepc.colorado.edu/publication/virtual-schools-annual-2015>
- Molnar, A. (Ed.); Rice, J. K., Huerta, L., Shafer, S. R., Barbour, M. K., Miron, G., Gulosino, C., Horvitz, B. (2014). *Virtual schools in the U.S. 2014: Politics, performance, policy, and research evidence*. Boulder, CO: National Education Policy Center. Retrieved from <http://nepc.colorado.edu/publication/virtual-schools-annual-2014>
- Ohio Legislative Committee on Education Oversight. (2005). *The operating costs of Ohio's eCommunity schools*. Columbus, OH: Author.
- Patrick, S., Myers, J., Silverstein, J., Brown, A., & Watson, J. (2015). *Performance-based funding & online learning: Maximizing resources for student success*. Vienna, VA: Author. Retrieved from <http://www.inacol.org/resource/performance-based-funding-online-learning-maximizing-resources-for-student-success/>
- Ravitch, D. (2010). *The death and life of the great American school system: How testing and choice are undermining education*. New York: Basic Books.
- Ravitch, D. (2013). *Reign of error: The hoax of the privatization movement and the danger to America's public schools*. New York: Alfred A. Knopf.
- Schmidt & Carbol Consulting Group Inc. (2014). *Alberta distance education review – Final report summary / New directions for distance education: Toward flexible learning*. Victoria, BC: Author.
- Watson, J., & Gemin, B. (2009). *Promising practices in online learning: Policy and funding frameworks for online learning*. Vienna, VA: International Association for K-12 Online Learning. Retrieved from <http://www.inacol.org/wp-content/uploads/2015/02/funding-and-policy-frameworks-for-online-learning.pdf>
- Winkelmans, T. (2011). Distributed learning funding in British Columbia. In M. K. Barbour, *State of the nation: K-12 online learning in Canada* (pp. 25-27). Vienna, VA: International Council for K-12 Online Learning. Retrieved from <http://k12sotn.ca/papers/distributed-learning-funding-in-british-columbia/>
- Winkelmans, T., Anderson, B., & Barbour, M. K. (2010). Distributed learning in British Columbia: A journey from correspondence to online delivery. *Journal of Open, Flexible and Distance Learning*, 14(1), 6-28. Retrieved from <http://www.jofdl.nz/index.php/JOFDL/article/view/29/26>

State of the Nation: K-12 E-Learning in Canada – <http://k12sotn.ca>