Online Learning

School and School Authority Leader Guide

Alberta

Cette publication est disponible en français.

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Introduction

This online learning guide for school and school authority leaders is intended to provide both beginning and seasoned leaders with information and supports for delivering quality online learning programs to students in Alberta. It highlights practices and policies that are essential to ensuring students are provided a welcoming, caring, respectful and safe online learning environment that is respectful of diversity and nurtures both a sense of belonging and a positive sense of self.

The education system in Alberta today reflects a diverse landscape. From large urban high school programs to smaller rural schools, online learning has been growing for many years. Each program is unique and is designed to be responsive to the needs and context of its community. In addition, the number of students enrolling in online learning programs both nationally and internationally is growing.

In this guide we answer questions such as:

- What does online learning look like in Alberta?

- How does funding work for online learning programs?

- How are teachers supervised and evaluated?

- What supports are necessary for students at risk?

- How can we measure and ensure success for students in online learning programs?

Online Learning Terms

Having an understanding of the terms related to online learning helps provide clarity regarding what it is and how it is offered.

Online Course

An online course is one in which instruction and assessment takes place primarily over the internet through a Learning Management System (LMS).

Learning Management System

LMS is web-based software designed to store learning content, coursework, feedback, communications, and to manage student progress online.

Online Learning Program

An online learning program is a structured learning environment in which students engage with their teachers in one or more courses online. Alberta certificated teachers are responsible for instruction and assessment of student learning.

Blended Learning

Blended learning environments provide students with the opportunity to engage in their learning partly online away from their teacher and partly in a face-to-face environment, e.g., in a classroom or outreach setting.

Asynchronous Instruction

Instruction or communication that is not "live" between participants, e.g., email, forums, message boards, blogs, videos or podcasts.

Synchronous Instruction

Online teaching and learning in which the participants interact at the same time and in the same space. Video or web-based conferencing is an example of a tool used for synchronous instruction purposes.

Web-based Conferencing

Web-based conferencing is a way of meeting "live" or synchronously using a web cam, headset and microphone using software such as Blackboard Collaborate, Google Hangout, Skype, Zoom, Adobe Connect or Big Blue Button.

Credit Recovery

Credit recovery provides opportunities for students who have not been successful in a course to redo coursework or retake the whole course in order to obtain credit or a higher mark than previously earned. Online learning is one of many ways to achieve this.

High School Credits Online

High school students are the biggest users of online learning in Alberta Kindergarten to Grade 12 schools.

Supplemental Online Course

Supplemental courses are single courses offered in Grades 10 to 12 and are usually taken due to timetable conflicts in a brick-and-mortar school, e.g., a student cannot fit Math 30-2 in their first semester schedule and takes it online instead. Some students will take a supplemental online course as a matter of choice.

Students generally take only 1 to 2 supplemental online courses at the same time to avoid academic overload.

Concurrent Registration

When a student enrolls in a supplemental online course at a school that is not their local school, this is referred to as a concurrent registration. Students would be registered in two schools, their local school and the concurrent school.

Many schools offering online learning programs accept students as "concurrent" registrations. These online course registrations can occur at any school that provides online learning programming throughout the province, not just in the student's local area. See Alberta Education's Online Learning Directory at education.alberta.ca/online-school-directory

The Alberta Landscape

Alberta has a diverse educational landscape. From remote rural areas to large urban settings, online learning is becoming a popular programming choice for Alberta students. This may be due in a part to the ability of online learning programs to both tailor educational programs to the individual needs of a student, and improve access to course offerings across the province.

There is an increasing number of school authorities providing online learning programs in Alberta, primarily serving the educational needs of students in their own geographic area or school authority. Some of these school authority-based programs provide programming for students in other regions of the province as well. The number of students enrolled in online learning programs continues to increase and approximately 85 per cent of these enrolments are at the high school level.

Online Learning in Canada:
(Per cent Involvement)
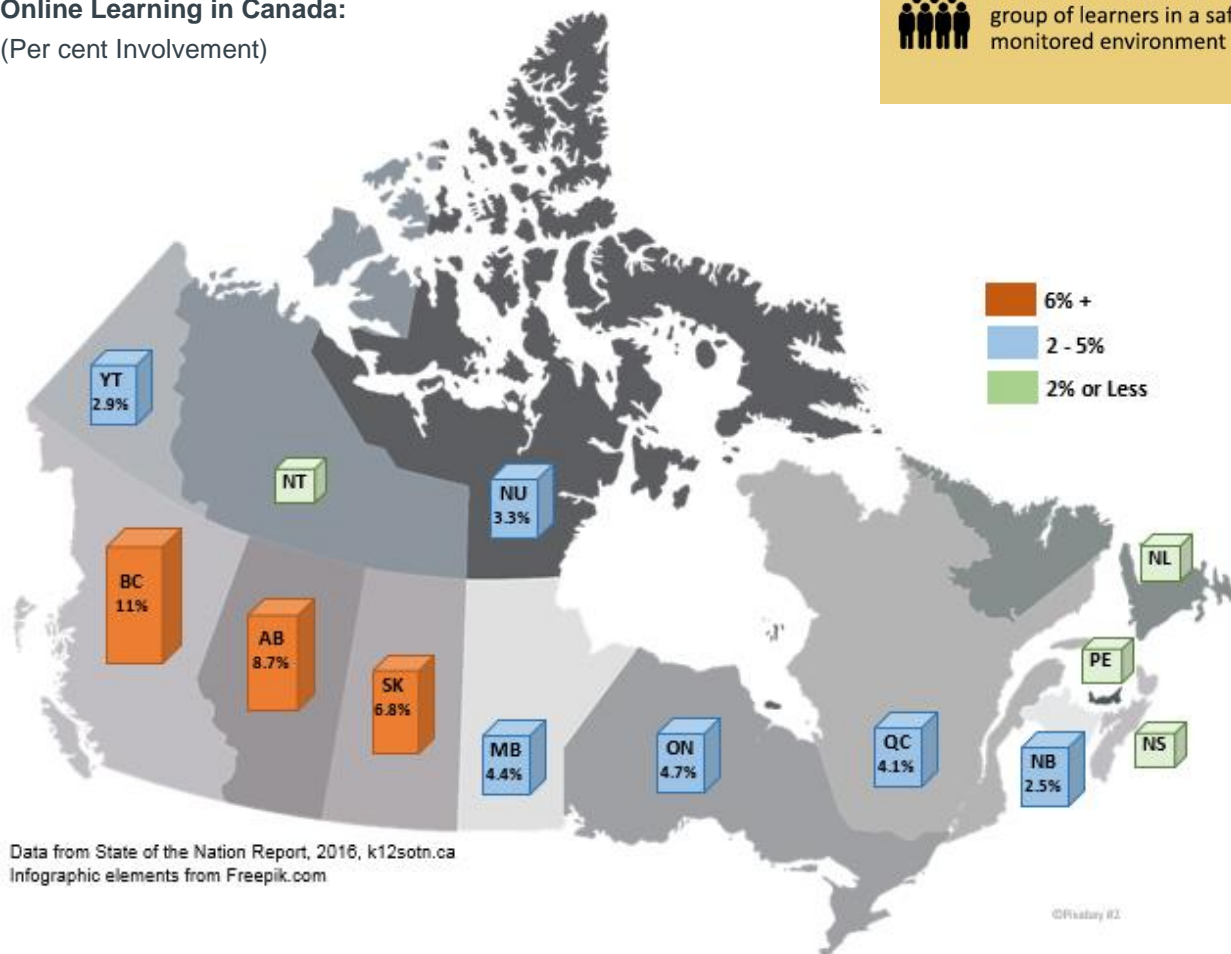
What Students Like about Learning Online

- Greater choice of courses
- Interactive and engaging content in the course
- The ability to learn at their own pace
- Frequent, supportive interactions with teachers
- Up-to-date information about their progress
- Interact with a diverse group of learners in a safe, monitored environment

6% +
2 - 5%
2% or Less

YT 2.9%

NT

NU 3.3%

NL

BC 11%

AB 8.7%

SK 6.8%

PE

MB 4.4%

ON 4.7%

QC 4.1%

NB 2.5%

NS

Data from State of the Nation Report, 2016, k12sotn.ca
Infographic elements from Freepik.com

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Approaches to Online Learning

Exploring the Why, Where, How and Who

Students generally choose online learning programs for four reasons: as a program of choice (to match learning style/preference), to resolve a timetable issue, to help complete high school and/or to provide access to courses not available in their own school.

For school authorities that offer online learning programs, decisions about how to provide courses, physically meet with students, and support diverse student needs, depend on the unique context of each school authority.

While many school authorities began their online learning programs as a way of digitizing their home education programs and print-based learning, modern technology now offers school authorities a wide variety of options for course delivery and student engagement.

The building blocks of an online learning program are outlined in the following section.

Building Blocks of Online Learning

The "building blocks" of an online learning program are the unique combination of Who, Where, How and Why that come together to meet student needs.

Where	How	Who
Home		Gr. 1-6 / Gr. 7-9 / Gr. 10-12
School: Classroom		Concurrent
School: Learning Commons	Fully Online*	Rural / Small School Authority
School: Study Room	Blended	Home Education Transition
Outreach	Fully Online* + Paper	Medical / Travel
Community	Print-based	At-Risk / Highly-Motivated
		School Authority / Outside of Authority

Why: Program of Choice | HS Completion | Timetable | Access
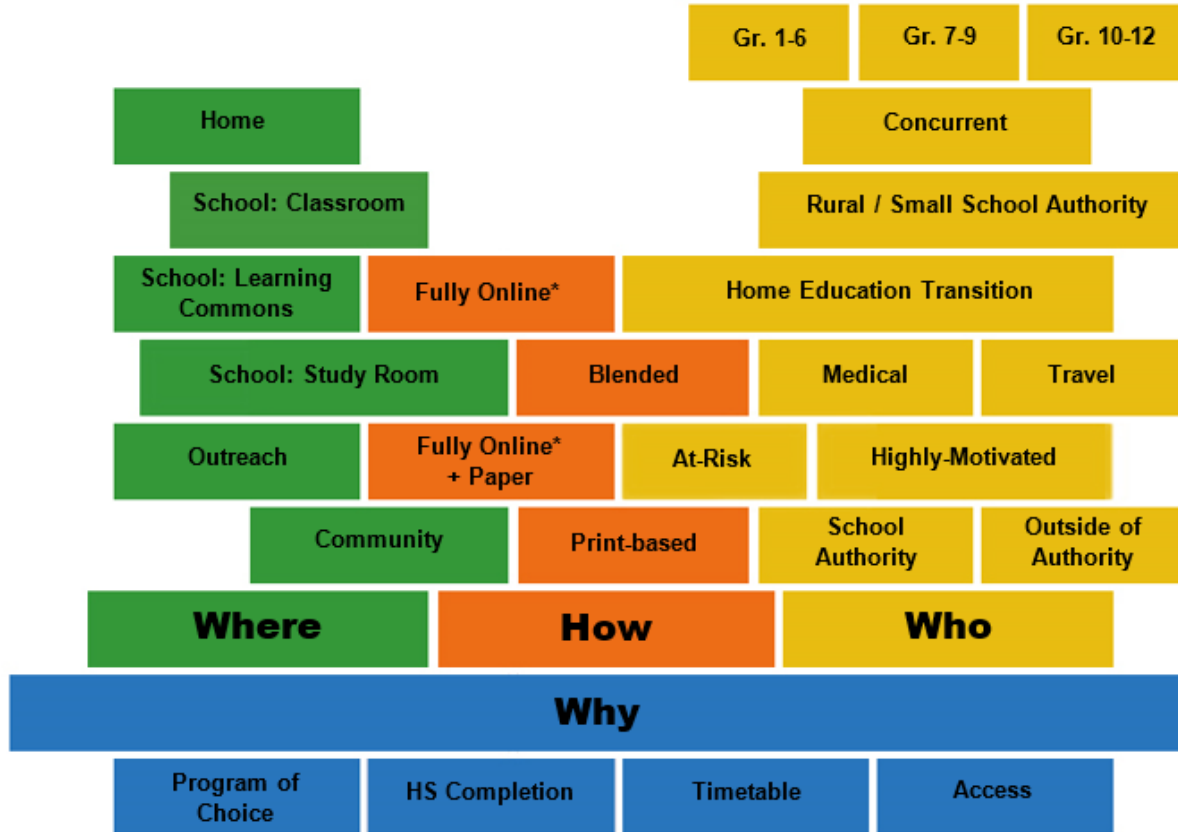
*Fully Online=no face-to-face interaction

A Program of Choice

There is a wide variety of programs available to Alberta students. Online learning for some students can be a more successful programming choice than a traditional brick-and-mortar environment.

The *Guide to Education* highlights the importance of choice in Alberta's education system.

> *School authorities have the flexibility to use resources and any method of delivery as long as Alberta Education requirements, including outcomes of the programs of study, are met. There are various program options for schools to respond to student learning needs. (p. 79)*

The *Guide to Education* goes on to describe the variety of learning opportunities school authorities may use to respond to the educational needs of students, including online learning.

As the education system continues to evolve, online learning programs are seen as one program choice among many, rather than solely for the purpose of resolving timetable conflicts or for placement of students who have been unsuccessful in other programs.

Promising Practice
Some school authorities have explored a shared timetable, allowing students to have a common timetabled block to meet with their primary school coordinator or access their online teacher during the school day.

High School Completion

Alberta continues to focus efforts on increasing the number of students completing high school. Online learning programs provide increased opportunities for students to complete high school, particularly for those students who are "early leavers."

We have learned from the *High School Flexibility Enhancement Pilot Project,* that online learning was described as one approach that "*has the potential to redefine pedagogical models by breaking down barriers of time and location, enabling students to access [courses] in a self-paced, exploratory fashion, as well as to create knowledge through virtual communities and knowledge webs.*" (https://education.alberta.ca/media/3115016/hsepp_report_2013final.pdf)

Schools in Alberta are now using online courses to provide additional innovative opportunities for students to achieve the outcomes of the Alberta curriculum (programs of study), both within the walls of classrooms (through blended teaching and learning) as well as other locations outside the school.

Online learning supports high school success in a number of ways including:

- credit recovery;
- fourth- and fifth-year high school programs; and
- supporting students at risk, which is explored in more detail in the following section.

Alberta Education distributes letters to high school students who have left the system without having completed the requirements for a high school diploma to help raise this awareness of opportunities including online learning programs, which can accommodate students who require flexible approaches to high school completion.

Timetable Conflicts

School authorities that develop their own online learning program often do so to help resolve timetable conflicts for high school students in their brick-and-mortar schools, in addition to providing the opportunity for students to engage in their learning in an alternative fashion. Students can be registered concurrently at two schools and both schools share the responsibility to support student success.

Access

For students interested in accessing courses not offered in their own school or school authority, e.g., Forensics 25 or Psychology, online learning opens the door to a wide variety of courses and specialized teachers.

Some school authorities in Alberta are augmenting their course offerings by:

- providing instruction through video conferencing allowing students to join remotely from geographically disparate places in their school authority;

- contributing to a repository of courses developed by subject matter experts for sharing purposes;

- creating an agreement with a neighboring school authority to deliver a course to their students; and

- accessing courses provided by the Alberta Distance Learning Centre (ADLC).

These online learning options can provide students with additional choice and personalization of their high school program.
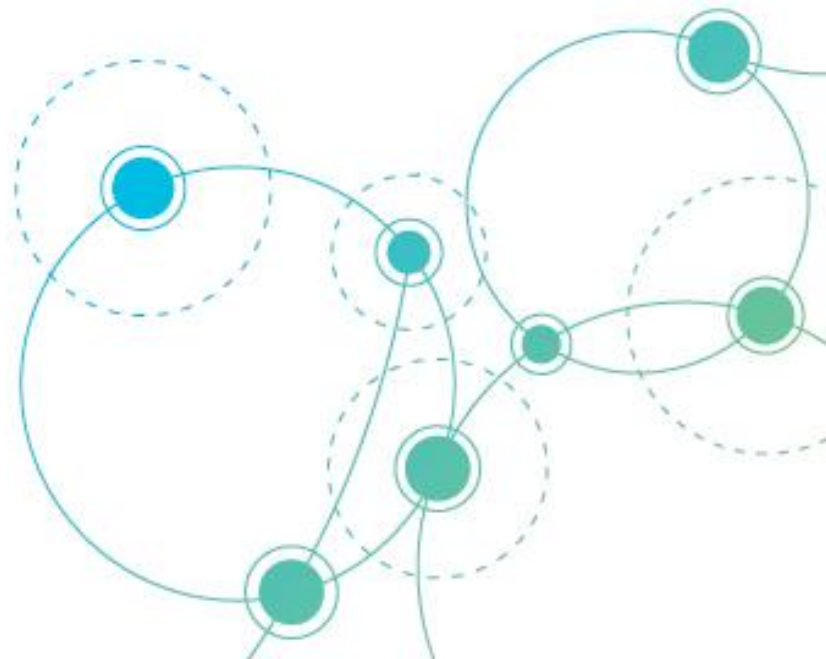
Where Online Learning is Offered

Online learning can be provided in many ways, expanding far beyond the stereotype of a student who never leaves their home or engages in face-to-face interactions with other students or their teacher.

When online learning students are working at home, technology can connect them to their classmates and teacher in powerful ways. Whether through web-based conferencing software or even the camera on their cell phone, meeting synchronously with others enriches their learning and engagement in the course.

Learning online does not have to be a solo experience. An entire class can take an online course (or a small unit within one) and work together in a classroom or continue on their work at home in the evening.

Depending on the physical space available, many configurations can be created in a school or community site to support online learning.

Some examples include:

- An open area at school converted to a "learning commons" with open seating, wifi technology, collaborative spaces and access to a support teacher/mentor.

- Including an online learning program as part of an outreach centre or community site, particularly one with a gym, kitchen or other multipurpose facility.

- A "mobile classroom" where an online teacher travels between different communities, holding in-person "drop-in help" times, providing hands-on lessons and hosting live student events in the community.

©thelmadatter   Full Credit in Appendix

The key to all of the location options is that they provide students with the ability to have a face-to-face connection with their teacher, resolve potential issues early, and ensure students are progressing successfully in their course(s).

How Online Learning is Offered

Online learning is offered in many different ways. It can take place in a variety of combinations of online, blended and print-based learning.

The following outlines some advantages and considerations of different approaches.

Fully Online

The majority of the learning, instruction and assessment takes place online. Students use a LMS such as Moodle or Desire2Learn (D2L) to access their course work. Fully online can be offered synchronously and asynchronously.

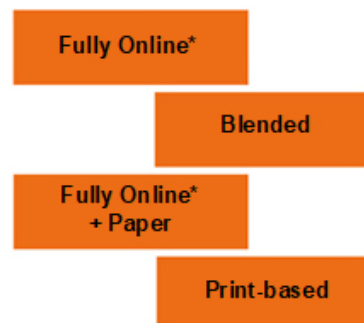| Fully Online* |
| Blended |
| Fully Online* + Paper |
| Print-based |

*Fully Online=no face-to-face interaction

- Ideal for: students who are strong, independent learners, who can access help when needed throughout the week.

- Considerations: technology such as web-based conference software, texting apps and video creation software are needed, as well as staffing to ensure students are well supported.

Why Synchronous is Key: Live instruction, using web-based conferencing tools, allows the teacher and student and other students to interact in real time together over the internet. Through the audio and video connection with the teacher, students experience increased engagement and learning retention.

For older students who are taking online courses concurrently and might be unable to attend a synchronous class, teachers may offer scheduled "office hours" or other drop-in times for one-on-one synchronous instruction during time slots throughout the week. Synchronous instruction can strengthen asynchronous approaches to distance education and often contributes to increased success rates.

Blended (Online with some Face-to-Face Instruction)

Blended learning occurs when there is a face-to-face complement to the online delivery of the course, with some of the online instruction occurring in a physical space away from the teacher. The strength of this model is the student/teacher relationship that forms with face-to-face contact, with the flexibility of pace (how quickly or slowly students learn course content) and space (where a student learns) in learning online. This can occur in open drop-in or flex times or through required attendance in a traditional classroom or outreach setting.

- Ideal for: students who require increased levels of support in their learning and/or closer attendance monitoring, as well as for subjects with a hands-on component or specialized equipment that a student may otherwise not have access to.

- Considerations: physical space in a school or outreach centre is required, as well as staffing to ensure student support in accessing academic support and/or counseling.

Online and Print-based

Depending on the context of the students being served within the school authority, some students will benefit from a more differentiated approach for effective learning. These students' needs can be effectively met with a combination of online learning, instruction and assessment, along with the ability to print some sections of the course/assessments. The engaging components of the online course can be retained while meeting the unique learning styles of students.

- Considerations: The creation/use of print-based materials that are engaging and include higher-order thinking skills, ongoing assessment by the teacher, monitoring issues such as plagiarism, and maintaining the integrity/expectations of the online component are important. It is essential to ensure that teachers are not simply "markers" of paper-based lessons.

Print-based

For students without access to reliable wifi in their homes or for those who learn without the assistance of a computer (but still want or require distance learning), print-based coursework may be an option. It is recommended that all print-based learning have a strong component of teacher interaction, whether through a companion LMS online, regular face-to-face meetings at an outreach site or through regular email/phone or other synchronous contact with the teacher.

- Considerations: The creation/use of print-based materials that are engaging and include higher-order thinking skills, ongoing assessment by a teacher, monitoring issues such as plagiarism, and maintaining the integrity/expectations of the online component are important. It is essential to ensure that teachers are not simply "markers" of paper-based lessons.
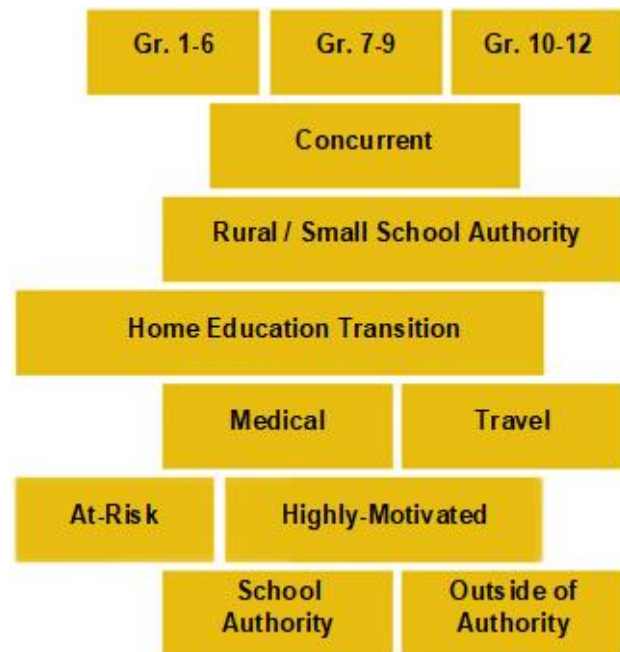
Supporting Student Success

Similar to traditional brick-and-mortar programs, online learning demographics range from highly motivated students to those deemed to be at risk and requiring additional supports. In addition to recognizing different student demographics in online learning programs, there is also the unique set of challenges posed by distance education itself.

Under Alberta law, students, parents and school authorities have responsibilities for ensuring welcoming, caring, respectful and safe learning environments that respect diversity and nurture a sense of belonging and a positive sense of self. In any program where there is a separation between student and teacher, schools must exercise increased vigilance so that students are assured these same characteristics in their learning environments.

School and school authority leaders are required to have a basic understanding of how school authority attendance policies apply to students in online learning programs, particularly if there is no requirement for on-site attendance. Additionally, online learners with academic coding, physical/emotional struggles and/or other needs, require access to appropriate supports in their learning.

Screening and Onboarding

The first step in supporting students is to work together with the student, caregiver and the local school to determine if online learning is going to be a successful choice for them. The Online Learning *Student & Family Guide* has several resources to help assess the readiness of students to begin learning online and to ensure that necessary supports are in place for student success.

Once registered, an onboarding process is necessary to ensure that students are in the right courses, are familiar with the LMS, and understand how to access their teacher throughout the week.

> **Promising Practice:**
> Some school authorities have established a "first week triage" where all staff work together to get students logged in and finished the first assignment by the end of the first week. They report increased course completion rates as a result of helping non-starters early in their learning.

Age and Online Learning Considerations

Kindergarten to Grade 6

In the field of online learning, few programs serve students younger than ten years of age. Generally speaking, elementary students are not developmentally ready to succeed in an online learning environment. In the few programs that do offer online learning opportunities for elementary-aged students, successful programs include daily interaction with a teacher. If online learning is offered to students in these grades, it is highly recommended that daily synchronous instruction and face-to-face social opportunities be a part of their program.

It is also important for caregivers to be home during the day to support but not instruct students.

Grades 7 to 9

Students in these grades are starting to become independent learners, exercising increased autonomy regarding decisions about their coursework and have daily routines. Caregiver involvement may begin to decrease, requiring increased vigilance from the school authority regarding attendance and progress monitoring. Students still need access to school services such as academic supports and counselling.

Grades 10 to 12

The vast majority of students (85 per cent) registered in online learning programs are high school students. Unlike students in younger grades, high school students generally have a higher degree of independence and autonomy. Most are more developmentally ready to engage in and be successful in online courses on their own.

Many high school students registered in online courses are enrolled concurrently with two schools. The primary reasons for concurrent registrations usually pertain to timetabling issues, lack of course availability in a particular school, or students wanting the flexibility that online courses offer.

Regardless of the reason for enrolment, a student's local school has an important and often overlooked role in supporting these students in successfully completing their concurrent course(s). Having an online learning mentor or coordinator in the local school is essential to ensuring student success.

Supporting students with concurrent enrolments is a partnership between schools. It takes communication and coordination between the local school and the school offering the online learning program to ensure that students are progressing through the course and getting the academic help they need.

Students Requiring Extra Supports

While learning supports are universal for all students, some students may require additional resources and coordination. Some examples include students who are:

- from school authorities that may not offer a broad range of programming;

- deemed to be at risk;

- English language learners;

- in need of additional supports;

- highly motivated;

- transitioning from a home education program; and

- unable to physically attend school.

In addition to these common student demographics, school authorities may also support resident students from other school authorities that may not always offer a broad range of programming.

Supporting Equitable Access to a Broad Range of Programming

Online learning offers Alberta students access to their choice of course or program, regardless of geographical location. Students may not have access to as wide a variety of local courses. Accessing online learning programs can help bridge this gap.

Some students may not have access to consistent and reliable internet. In supporting these students, a hybrid approach of online learning, onsite learning, and/or accessing print-based resources online are options.

An essential component in distance education programs is the availability of a teacher or academic mentor who holds scheduled office hours at the local school. Accessing academic help when needed and preferably in person can help support students in online courses. These mentors/coordinators can also help with registration, deadlines and assignment support.

Students At Risk

Some school authorities offering online learning have reported a higher than average population of students deemed to be at risk enrolling in online courses.

Online learning can be a successful choice for students at risk, as it removes many of the barriers to successful learning. Online learning allows students to learn from home, learn at their own pace, manage family schedules, and interact safely with other students and their teacher in a positive environment.

Because of attendance issues and missed learning, students at risk may require academic screening/evaluation to determine functioning grade levels. Online learning can offer a customized learning experience for students who may have gaps in some of their academic subjects. It is essential to have a clear support system in place, including a pyramid of interventions and access to counselling and other supports, as necessary.

Students at risk may require additional supports, including:

- accessing their account and getting started;
- catching up from a late registration and creating a compressed deadline schedule;
- establishing routines at home;
- feeling comfortable communicating with school staff and their peers; and
- having access to one or more caring, positive, supportive adults with whom a trusting relationship is established and maintained for social and emotional support.

Most students and students at risk in particular, will experience greater success when they have some element of blended learning, face-to-face interaction with their teacher, whether through required drop-ins at school, an outreach centre, or meeting at a public library once a week.

School authorities are required to meet the educational needs of *all* their students. This includes providing supports for students with complex needs as per the Alberta Education's Standards for Special Education. Alberta Education provides supports for these students through funding for Regional Collaborative Service Delivery for school authorities. See Alberta Education's *Funding Manual for School Authorities*), *Success in School: Children and Youth in Care* initiative and the *Alberta Mentoring Partnership*.

English Language Learners

Students enrolled in English as a Second Language (ESL) programs likely require additional supports to be successful in an online learning program. As with any student, individual needs and experience play an important part in organizing for student success. Although additional funding is not provided for students coded as ESL in online learning programs, these students may experience success with appropriate organizational and programming supports, including consideration of:

- previous technology experience;
- minimum language proficiency benchmark (three is recommended) https://www.learnalberta.ca/content/eslapb/index.html;
- use of online learning in a blended learning environment with daily face-to-face interaction and support;
- language difficulty of the course;
- age; and
- scaffolded differentiated instruction.

As with all students considering enrolment in an online learning program, appropriate screening and onboarding and ongoing support of English language learners is needed to ensure successful program placement.

Students Requiring Additional Supports

Some students have profound and ongoing needs and others have short-term or situation-based needs. This calls for flexibility and responsiveness in adapting to the changing needs of students. While online learning may provide flexibility for some students, those with complex learning needs or language challenges may need additional support to be successful in their learning. Increased face-to-face support through a blended teaching and learning approach may be required.

Highly Motivated Students

A segment of online learners is highly motivated students looking to have more autonomy over their high school program. These students typically want a faster pace of learning and the ability to take courses outside a regular school timeline. These students may need support with late registration in their courses, accessing summer school credits, and writing mid-semester diploma exams.

Because of the unique and sometimes complex course load of these students, they may also need course completion support and academic counselling to ensure they are taking appropriate courses for their program.

Students Transitioning from Home Education

Some students transitioning from a home education program may require additional supports to adapt to their new learning environment. In order to help ensure students experience success their program, school leaders may want to consider assessing pre-requisite knowledge and skills for students transitioning to online learning programs prior to enrolling them (refer to "Screening and Onboarding," p. 17).

One of the primary motivations of caregivers moving their children from home education to online learning at the high school level is their desire to ensure that the student receives an Alberta High School Diploma. It is important that caregivers and students are aware that completion of home education programs through to Grade 12 does not necessarily result in the completion of a high school diploma, which may vastly decrease the ability to access post-secondary programs.

It is important for school and school authority leaders to point out that caregivers cannot provide grades or final assessment marks for high school courses to any public or private school. All courses offered by public or private schools must clearly state that they meet Alberta Education requirements.

While some home education program providers offer access to online courses and resources, it is important that families be aware that completion of these courses do not ensure credits or progression toward an Alberta high school diploma.

For students transitioning from home education to online learning programs, a shared responsibility program is often a strong option. In this program, a portion of the student's program is identified as home education and remains under the supervision of the parent/caregiver and the other portion falls under the supervision of an Alberta certificated teacher. See the *Guide to Education* for further information on shared responsibility programs.

Students Unable to Physically Attend School

Some students are unable to physically attend school due to medical conditions, having to work, living in rural/remote areas, travelling for extended periods of time, high-level athletics, international competitions, anxiety or other mental health issues.

With appropriate supports in place, online learning programs can be a successful option for these students. Students can benefit from synchronous learning opportunities that allow them to have "face-to-face" contact using webcams and headsets, as well as the asynchronous contact in forums and other aspects of their online course. These interactions keep them connected to the teacher and other classmates across time zones and vast distances.

Flexible Access to Programming

School authorities may provide online learning programming to Alberta students who are travelling or are out of province temporarily. It is important to note school authorities' primary focus must be the provision of programming to students who are residents of Alberta.

Schools providing access to online learning, for students who are at another school outside the school authority within the province of Alberta now have increased access to student information at the point of registration. Alberta Education's Provincial Approach to Student Information (PASI) has established a timeline of September 2020 for the implementation of digital student records to address challenges related to student mobility, support appropriate program placement and student success.

Consideration must be given to appropriate arrangements for writing summative assessments as well as provincial achievement tests and diploma exams for all students registered in online learning, regardless of the student's location.

Starting an Online Learning Program

The growth of online learning programs in Alberta is in response to a number of factors including a:

- increased capacity of school authorities to respond to unique student needs;

- desire to effectively manage approaches to high school redesign; and

- requests to serve students within a school authority rather than sending them elsewhere for instruction.


Alberta Student Enrollments Online Learning Programs
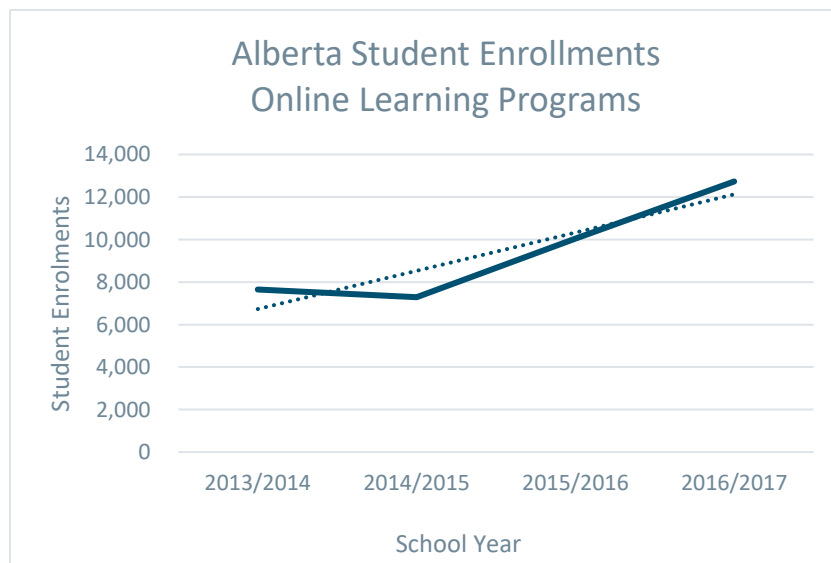
As students express interest in pursuing their studies online continues to grow, so does the need for school authorities to respond to this demand. It is therefore becoming increasingly important for school and school authority leaders to deepen their understanding of the factors to consider in establishing or expanding online learning opportunities for students.

Alberta Framework for School System Success

Dimension 12 of the *Alberta Framework for System Success* as well as the study commissioned by the College of Alberta School Superintendents (CASS) in 2010 titled *Characteristics of High-performing Jurisdictions in the Application of 21st Century Learning Technologies* identified three leadership strategies related to leveraging technology for learning.

1. School and school authority leaders focus on the instructional core and the ways in which changes in emerging technologies impact, change, threaten, enrich or enhance the instructional core.
2. School authority provides proactive leadership and support of the implementation of technology within a strong vision for learning.
3. Senior leaders employ IT governance approaches to align the system's strategic IT direction with the school authority's goals, to manage IT risks and to ensure that resources are used appropriately and responsibly.
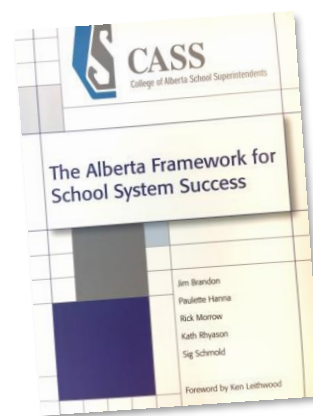
It is important for school and school authority leaders to be aware of schools engaging in innovative practices related to teaching and learning. The continuing growth of online and blended learning requires ongoing support at the system and school level in order to be successful.

Considerations

In making the decision to start an online learning program within a school authority, leaders need to make decisions related to key elements of the program.

- Will it be a fully online learning program with little or no on-site attendance required?
- Will it have more of a blended approach to learning including some online and some face-to-face?
- Will there be primarily synchronous or asynchronous instruction or both?
- How will physical education, art and music be taught, ensuring that Alberta certificated teachers are responsible for instruction?
- Will teachers be required to work at a site?
- How will student enrolments be determined? Will there be a cut off at a certain date, cohorts or continuous enrolment?
- Will it be a semester or full year course? Summer school? Year round schooling, e.g., high school?

Understanding Policy through the Online Learning Lens

It is important for school authority leaders to know that all provincial policies apply to online learning programs, including:

- *Teaching Quality Standard (TQS)*;

- *Leadership Quality Standard*;

- *Superintendent Leadership Quality Standard*;

- Teacher Growth, Supervision and Evaluation;

- *Guide to Education*;

- *Funding Manual for School Authorities*;

- *Learning and Technology Policy Framework*; and

- Ministerial Order on Student Learning.

Consideration of unique characteristics of online learning/distance education teaching and learning environments is appropriate in relation to provincial policies.

Demonstrated strength in aspects of the *Leadership Quality Standard* and the *Superintendent Leadership Quality Standard* is also important in providing effective leadership in online learning programs.

Assigning Online Learning Program Codes

In ensuring appropriate supports are in place and for system-wide accountability purposes, it is important to understand how to accurately assign codes related to online learning programs.

☑	- ***At the school level*** - ensure that **online learning program offerings** are identified in the Provincial Education Directory (PED) and on the school information form (public, separate, Francophone and charter school authorities) or annual operating plan (private school authorities).
620	- ***At the student level*** - students participating in online learning programs as per the definition provided in the *Guide to Education* are identified through the use of **grant code 620** (online learning program).
VTL	- ***At the course level*** - through the creation of **VTL (virtual)** course sections in student information systems when a course is deemed to be online, as per the *Guide to Education*.

Funding Online Learning Programs

As Alberta Education provides funding to school authorities (not schools), it is important for school authority leaders to be aware of the unique needs of schools that provide online learning programs within their specific contexts including:

- technology infrastructure requirements to support a LMS;
- software licenses for synchronous instruction tools and anti-plagiarism tools;
- technology staff to ensure minimal disruptions to learning;
- time required for course/resource development;
- considerations for students to access supports; and
- writing exams.

While there are currently some funding envelopes that students are not eligible for in online learning programs with program grant code 620 (see *Funding Manual for School Authorities*), funding is not impacted when students are enrolled in a course section identified as VTL (online).

Alberta Education PASI community site provides knowledge-based training materials and videos to develop deeper understanding regarding the accurate managing of student information.

Staffing

As in any other school, additional support staff may be needed over and above teaching staff including educational assistants, technology support staff, and mentors/coordinators in the school where the student's primary registration occurs.

Professional Learning

It is important for school and school authority leaders to recognize that district-wide or division-wide professional learning activities may have less relevance for teachers in online and blended environments. Opportunities for those teachers to learn and collaborate with other professionals in similar environments may be beneficial.

A list of potential professional learning opportunities related to online and blended learning is provided at the end of this guide for consideration (Appendix 1: Conferences, Associations and Resources).

Technology Support

Regardless of student demographics, it is important for students to have access to technology needed for them to be successful in their learning. While most families generally have the needed technology available to participate in online learning programs from home, some students may require access to technology supports to participate in an online learning program.

Schools may at their discretion loan a computer or other technologies to students in need, on a case-by-case basis, which should then be returned upon course/program completion, as these items remain the property of the school.

Community supports such as [Computers for Schools](http://www.cfsalberta.ca/) (http://www.cfsalberta.ca/) can assist school authorities in providing technology supports for students in need. Some libraries and other local public centres offer free computer and internet access, although this may not be ideal for daily synchronous instruction sessions.

Rural students who struggle with internet access from home will benefit from online courses that incorporate opportunities for assignments to be printed for completion asynchronously.

Organizing a Program

Alberta has a strong foundation in online learning due to the evidence-based, continuous improvement culture found in school authorities across the province.

What distinguishes online learning from other distance education models is the ability to leverage technology to enhance student-learning opportunities. Using a LMS, synchronous classes and communication software, online learning programs can meet the same student engagement and course rigor as any traditional brick-and-mortar classroom.

The following section outlines some recommendations and effective practice guidelines for schools offering online learning programs.

"The key to success is to appreciate how people learn, understand the thought process that goes into instructional design, what works well, and a range of different ways of achieving goals."
- Tim Buff

The Role of the Principal, Teachers, Organizing Classes and Scheduling

Principal

The principal plays an essential role in leading online learning programs. Programs are successful when the principal has background knowledge, experience and/or education in online learning pedagogy to ensure program and student success.

Effective supervision and mentoring teachers in online, blended and distance education environments is more likely to occur if the principal understands what strong pedagogy in these environments looks like, and utilizes observation, reflection, and feedback tools intended to support and guide teachers in these environments. As stated in the *Leadership Quality Standard*, "*Quality leadership occurs when the leader's ongoing analysis of the context … result in quality teaching and optimum learning for all school students.*" This includes online learning and distance education contexts.

It is important to note that Section 20 of the *School Act* requires principals to provide a welcoming, caring, respectful and safe learning environment that respects diversity and fosters a sense of belonging.

Teachers

Teaching in online learning environments requires an additional skill set over the brick-and-mortar teacher, balancing technology, management and engagement of students in a distance learning environment, and the instructional design of their virtual coursework are but a few considerations in ensuring student success.

Teachers who have experience with emerging technologies can typically adapt well to online and blended teaching and learning environments. Previous participation in online courses can be helpful.

There can be a steep learning curve in offering online learning programs for the first time. Creating a mentoring partnership with an experienced online teacher often results in teachers new to this environment experiencing success.

Retention and promotion of teachers in these environments typically points to aspects similar to those of teachers in traditional brick-and-mortar schools:

- opportunities for ongoing, meaningful professional learning;
- opportunities for collaboration with others;
- leadership development capacity; and
- consideration of workload.

Additionally, ongoing supervision and evaluation of online teachers, opportunities for face-to-face teaching and student interaction, as well as continued professional learning outside the online learning environment helps ensure that teachers can integrate smoothly back into brick-and-mortar schools if they choose.

Pre-service Training

At present, opportunities for pre-service training and field experience opportunities in online environments is somewhat limited in Alberta.

"To be effective, increasingly, [online] teachers must be able to:

    a. convey knowledge with limited face-to-face contact;

    b. design and develop course content in a technology-based environment;

    c. deliver content in a way that will engage students; and

    d. use assessment measures to assure that students master content."

(Archambault & Kennedy, 2014).

Currently, both the University of Lethbridge and Mount Royal University provide opportunities for practicum placements in alternative teaching and learning environments including online learning programs.

At the graduate level, programs such as Athabasca University's BOLT (Blended and Online Learning and Teaching) program and Victoria Island University's Online Learning and Teaching Graduate Diploma provide excellent training for teachers interested in pursuing graduate studies in online and blended teaching.

Considerations for Organizing Classes

Whether it is face-to-face, blended or distance education environments, considerations that inform quality teaching and learning apply to online settings.

In addition to Section 20 of the *School Act,* the revised *Teaching Quality Standard* (TQS) highlights the need for teachers to ensure that students have access to quality programs and learning environments where students are welcomed, cared for, respected and safe. Creating conditions whereby teachers are best able to achieve these standards is essential.

Some guiding questions to inform class organization are:

- Can the teacher monitor attendance and student wellbeing?

- Is there a significant number of students at risk or with exceptional needs?

- Can student engagement occur regularly?

- What is the age/grade of the students?

- Is daily synchronous instruction occurring?

- Is course development required?

- What is the breadth and depth of the courses the teacher is being assigned, e.g., core, options, diploma level?

There is a wide range in how programs can be organized and classes arranged. Considering these guiding questions and continuous dialogue with teaching staff, are contributing factors to ensuring that students' needs are being addressed so that they can be successful in their courses.

Scheduling Classes

Part of the school leader's role is to ensure that teachers are meeting the requirements for instructional time specified in collective agreements and in the *Guide to Education*. This can be achieved through the creation of a schedule that identifies when teachers are engaged in and available for interaction for the purpose of instruction with students.

Synchronous and Asynchronous Instruction

While many online courses are offered completely asynchronously (no required live time together), a correlation has been noted between achievement and the offering of scheduled, daily synchronous instruction (either virtually, face-to-face or a combination of the two), especially in divisions one, two and three.

In addition to increased achievement results, benefits to daily synchronous include:

- increased assurance for student safety through attendance monitoring;

- strengthened student-teacher and student-student relationships;

- more opportunities for formative assessment practices leading to decreases in concerns regarding authenticity of submitted work;

- increased opportunity to develop lifelong learning skills such as collaboration, self-advocacy, and social interaction;

- innovative model for assessing art, music and physical education;

- greater opportunities for principals to engage in growth, supervision and evaluation processes to ensure requirements of TQS are being met by teachers;

- opportunities for teachers to demonstrate proficiencies in student management, planning, formative assessment and live teaching; and

- increased opportunity to ensure that minimum hours of instruction are being met.

It is for these reasons that Alberta Education recommends daily synchronous instruction opportunities be provided to students in online learning programs for Grades 1 to 9 and that scheduled opportunities for individual or group instruction (open office time) be available to high school students, many of whom have schedules that will not permit attendance at synchronous sessions.

Continuous Student Enrolments

A unique challenge that many online learning programs face is a high volume of late registrations. By offering continuous enrolment, school leaders and teachers onboard students into their program by providing guidance on how to be a successful online learner, as well as adjusting course work and/or deadlines to accommodate a compressed timeline.

Students beginning a course late may also be at risk and require close monitoring for initial start-up, attendance and responding to communications from the teacher.

Principals must decide whether students will register:

- at any time throughout the year;

- in cohorts at specific times during the year;

- at the beginning of a new semester; and

- as a re-enrolment in summer school or during the next school year.

In terms of funding, although most enrolments for students in Grades 1 to 9 are in place by the last instructional day in September (count date) of each school year, agreements regarding the transfer of funding between two schools within a school authority may be arranged within a school authority if students are transferring to an online learning program mid-year.

School authorities may wish to consider a similar approach when a student is transferring between authorities. This can be a challenge if an online learning program accepts students outside of their school authority boundaries.

The keys to success in a continuous enrolment model include:

- creating a plan with the student for compressed course completion;

- monitoring student progress with an efficient, manageable tracking system; and

- early and frequent communication with the student and their family.

Instructional Design

The foundation of successful online learning programs is the design of online courses that offer a similar or increased level of student engagement, academic rigour and strong teacher presence comparable to most brick-and-mortar classrooms.

The legacy of some online courses has been scanning print-based resources into PDFs and posting them online. Modern online learning in contrast leverages a wide variety of technologies to engage students in tele-collaborative, interactive and media-rich learning.

Courses that incorporate research-based standards for quality, such as those found in the *iNACOL Standards for Quality Online Courses*, *Quality Matters* and the *Athabasca University Community of Inquiry*, enhance the student experience and increase the likelihood of success.

Ensuring that teachers have an understanding of the school's instructional design standards is important in this regard. A simple document highlighting research-based indicators for online learning courses (Appendix 3: Quality Indicators for Online Courses).

Consideration of Open Educational Resources (OER), creative commons, fair dealing and copyright must be included as part of the instructional design process and is particularly important in the development of online courses where most or all of the content is in digital form.

Accountability

Measuring Success of an Online Learning Program

The *Alberta Framework for School System Success* (2010) identifies five leadership strategies in using evidence to inform educational practice.

The school system:

1. has an efficient information management system;

2. provides schools with relevant data and assists them in using data to improve performance;

3. creates collaborative structures and opportunities for the interpretation of data in schools;

4. uses appropriate data for accounting to stakeholders; and

5. makes effective use of existing research to guide policy making and planning.

A broad base of measures can be used to determine the success of an online or distance learning program including:

- retention rates;

- completion rates;

- standardized tests (marks achieved and participation rates), e.g., Provincial Achievement Tests* (PATs), diploma exams;

- teacher-awarded final marks including final exam and summative assessments;**

- gaps in teacher-awarded marks and provincial tests;

- Accountability Pillar Online Report Initiative (APORI) data ([see here](#) to understand how the Accountability Pillar works);

- the *Tell Them From Me* survey;

- high school completion rates (credentialed and non-credentialed); and

- attendance or "attending to" learning.

*Currently participation rates in PATs for students enrolled in online and distance education programs is low compared to students enrolled in other programs throughout the province. Increasing participation rates would contribute to understanding success rates in online and distance education programs and in contributing to evidence-based continuous improvement.

**In an effort to increase program rigour, some school authorities offering fully online courses and programs are utilizing proctoring software programs for final exams and summative assessments that are completed at a distance such as *Respondus and Remote Proctor Now*. Other school authorities require students to write final exams and summative assessments at a designated site.

As part of iNACOL's release of Measuring Quality from Incomes to Outcomes: Creating Student Learning Performance Metrics and Quality Assurance for Online Schools (2012), Patrick, Edwards, Wicks, & Watson (2012, p. 14) suggest that measures for full-time online schools should include:

- proficiency;

- student growth along a trajectory;

- graduation rates;

- college and career readiness;

- closing the achievement gap; and

- fidelity to a student's academic goal.

Collaborative professionalism can be an effective strategy in the interpretation and use of student data to improve student success rates.

Attendance or Attending to Learning

Schools in Alberta must provide welcoming, caring, respectful and safe learning environments. A sense of belonging gives students feelings of security, identity and community. This supports academic, psychological and social development for all students. The processes for monitoring attendance as an aspect of student safety in online learning programs is important. An interpretation of attendance that is broader than physical attendance may be needed to fully understand what attendance looks like for students enrolled in online learning programs. Measures that can be used to better understand the degree to which a student is "attending to learning" may include:

- submission of assignments based on an agreed upon schedule;

- data analytics from a LMS, such as gaps in course access;

- log entries in student information system regarding correspondence with student by phone and email;

- attendance records/analytics from synchronous online sessions; and

- attendance records from face-to-face interactions.

School staff members who are able to develop caring relationships with students are better able to support all aspects of learning. Students with strong and rewarding social ties at school are less likely to struggle with chronic absenteeism and are less likely to leave school prior to completion.

Evidence-informed Continuous Improvement

Data and Research

In addition to a broad base of data, The Alberta *Framework for School System Success* (2013) articulates the importance of ensuring that current research is used to better understand how well (and in what ways) any program is meeting the needs of students. This applies to online learning programs as well.

There is a lot of research to support stakeholders engaged in online learning programs. This guide provides links to some important studies and supports that can be accessed to deepen understanding for leaders. Some of these include Clark & Barbour's (2015) *Online, Blended and Distance Education in Schools*, Ferdig & Kennedy's (2018) *Handbook of Research on K-12 Online and Blended Learning (Second Edition)*, and Barbour's (2016) *State of the Nation: K-12 E-Learning in Canada*. Organizations offering professional learning opportunities are listed at the end of this guide.

As with any other program, the use of data from local and provincial sources can contribute to understanding the success of an online learning program. It is important that school leaders understand how best to interpret such data and use it to improve instructional practices.

Response to Intervention

There are examples of school authorities in Alberta who have developed a district-wide response to intervention (RtI) as part of their continuous improvement processes. Because of the increasing number of students at risk enrolling in online learning programs, a well understood and implemented RtI is essential in ensuring that students successfully begin and complete their online courses and programs. Alberta Education has identified key components of an RtI as:

- collecting meaningful data at various levels;

- research-based supports at each level of the pyramid of intervention;

- using collaborative, problem-solving approaches; and

- through the use of data-informed decisions.

(Alberta Education, 2018: https://education.alberta.ca/response-to-intervention/what-is-a-response-to-intervention-approach/)

Teacher Growth, Supervision and Evaluation

"The *Teacher Growth, Supervision and Evaluation Policy* aims to ensure that teachers' actions, judgements and decisions are in the best educational interests of students and support optimum learning." (p.1). Further, the school principal is responsible for "providing support and guidance to teachers," as well as "observing and receiving information from any source about the quality of teaching a teacher provides to students" (p. 4). To that end, it is incumbent on the school leader to engage with teachers in a process whereby they can clearly articulate the teacher's ability to meet the requirements of the TQS.

In an online and distance learning environment, as with any other program, the principal can engage with their staff to identify how the TQS is being met. Some considerations include:

- the development of a reflection tool that can be utilized to coach teachers as part of the professional growth process;

- the use of checklists that identify how TQS requirements are met;

- having conversations about their courses using the quality course indicators sheet (Appendix 3: Quality Indicators for Online Courses); and

- observing teachers in blended and synchronous learning environments.

(Alberta Education, 2018: https://education.alberta.ca/media/1626684/tgse.pdf).

Connecting with Others

...[W]e need leaders who create a culture of growth; know how to engage the hearts and minds of everyone; and focus their collective intelligence, talent and commitment to shaping a new path. It is [the] consistent, collective shaping and reshaping of ideas and solutions that forges deep coherence across the system, [and turns] complexities and fragmentation into a focused, coherent force for change. (Fullan & Quinn, 2016, pp. 47-48).

When stakeholders engage in online learning programs where they are able to leverage their collective wisdom and expertise, the likelihood of students realizing their full potential for success increases. Opportunities range from the sharing of professional expertise at events like Alberta's blendED Symposium, to informal meetings between school and school authority leaders to learn from one another, to connecting with others nationally and internationally through organizations such as CANeLearn and iNACOL (Appendix 1: Associations, Conferences, Programs and Resources).

Alberta Education can provide supports by assisting with the process of connecting professionals with one another. School and school authority leaders can also do so by accessing the online learning program directory at education.alberta.ca/online-school-directory.

Appendix 1: Associations, Conferences, Programs and Resources

Associations

- Canadian eLearning Network (CANeLearn): http://canelearn.net/
- International Association for K-12 Online Learning (iNACOL): https://www.inacol.org/
- Quality Matters: https://www.qualitymatters.org/

Conferences/Symposiums

- blendED Alberta Symposium: http://www.blendedalberta.ca/
- CANeLearn Digital Learning Symposium: http://canelearn.net/symposium/
- iNACOL Symposium: https://www.inacol.org/symposium/

Programs/Courses

- Blended and Online Learning and Teaching (BOLT), Athabasca University: http://cde.athabascau.ca/programs/masters/focusareas/learning.php
- Leading and Learning in a Digital Age, Werklund School of Education, University of Calgary: https://werklund.ucalgary.ca/gpe/programs-specializations/master-education-med-interdisciplinary-route/leading-and-learning-digital

Resources/Websites

- Alberta MoodleHUB (course sharing, connecting, professional learning): http://hub.rockyview.ab.ca/
- iNACOL: National Standards for Quality Online Teaching (2011): http://www.inacol.org/wp-content/uploads/2015/02/national-standards-for-quality-online-teaching-v2.pdf
- Journal of Online Learning Research: https://www.aace.org/pubs/jolr/
- Handbook of Research on K-12 Online and Blended Learning (2018). Retrieved from https://figshare.com/articles/Handbook_of_Research_on_K-12_Online_and_Blended_Learning_Second_Edition_/6686813
- State of the Nation: K-12 E-Learning in Canada, 2016 Edition. Retrieved from http://k12sotn.ca/wp-content/uploads/2016/12/StateNation16.pdf
- Clark, T. and Barbour, M. (2015). Online, Blended and Distance Education in Schools. Stylus, Sterling, Virginia (book).

If you would like to connect with others who are in the online teaching world, you can consult the directory of other school authorities in Alberta offering online learning programs at education.alberta.ca/online-school-directory.

Appendix 2: Quality Indicators for Online Learning Programs

Quality Indicators for Online Learning Programs

Organizational Practices	Organizational Practices	Teaching & Learning (role of certificated teacher)	Supports	Teacher Evaluation
Mission Statement: ☐ Clearly conveys the online program purpose and goals. ☐ Guides strategic planning.	**Financial and Material Resources:** ☐ Targeted supports for infrastructure and resources to provide high quality program.	**Instructional Design:** ☐ Well organized, rigorous ☐ High level/quality of interaction ☐ Accessibility issues addressed ☐ Integrates HOTs (higher order thinking skills)	**Staff:** ☐ Supports through mentoring and professional learning opportunities. ☐ Technical assistance.	**Data:** ☐ Collection and analysis of data based on teacher, school, district and provincial metrics to improve teaching and learning.
Governance: ☐ School authority leaders work with school leaders to develop operational plans related to online learning program.	**Equity and Access:** ☐ Equitable access to online learning program for all enrolled students. ☐ Accommodations available to meet a variety of student needs.	**Instruction:** ☐ Serves diverse student learning needs. ☐ Ongoing monitoring of course progress and completion. ☐ Understanding and implementation of evidence-based practices.	**Students:** ☐ Screening/onboarding ☐ Academic/counselling/cultural supports ☐ Technical support ☐ Timely & meaningful teacher feedback/communication.	**Assurance:** ☐ Working with staff to ensure instructional quality using current policies, standards and indicators.
Leadership: ☐ Sets and meets operational and strategic goals in support of mission/vision. ☐ Principal understands and applies current policies in an online environment (TQS, Teacher Growth, Supervision & Evaluation, Ministerial Order, LTPF).	**Integrity & Accountability:** ☐ Leadership is transparent and provides timely communication on progress toward attainment of goals and achievement of student learning outcomes.	**Assessment of Student Performance:** ☐ Evidence of a comprehensive, integrated approach to measuring student achievement. ☐ Adjustments to instruction as needed.	**Parents/Guardians:** ☐ Provided information about program. ☐ Receive timely responses from staff. ☐ Provided ongoing information regarding student progress.	**Evaluation:** ☐ Courses reviewed periodically to ensure quality, currency and advancement of student outcomes related to programs of study.

Adapted from iNACOL's (International Association of K-12 Online Learning) *National Standards for Online Programs* (https://goo.gl/tBpc08).

Additional Resources include:

- *Alberta Education Teaching Quality Standard* - https://education.alberta.ca/media/3739620/standardsdoc-tqs-_fa-web-2018-01-17.pdf
- **iNACOL** -*National Standards for Quality Online Courses* (https://goo.gl/B2M72b) and *National Standards for Quality Online Teaching* (https://goo.gl/vBp4Ns)
- **Quality Matters** (https://www.qualitymatters.org/), and **ISTE** -*Digital Citizenship in Schools* (http://www.iste.org/docs/excerpts/DIGCI2-excerpt.pdf/)

Appendix 3: Quality Indicators for Online Courses

Quality Indicators for Online Courses

Clear course goals and support:
- ☐ Course outline
- ☐ Instructor contact information
- ☐ Orientation for student success
- ☐ IPPs reviewed (coded students)
- ☐ Required hardware/software (headset, etc)
- ☐ Navigation explained in welcome video

Course content aligned and responsive/rigorous:
- ☐ Higher-order thinking skills
- ☐ Adapted learning support
- ☐ Personalized, authentic (choice)
- ☐ Multiple learning paths
- ☐ I can statements, course outcomes identified

Grading policies (rubrics, rationale and/or grading indicators) are provided for:
- ☐ The course as a whole
- ☐ Each graded assignment
- ☐ Outcomes-based for credit recovery students
- ☐ Formative feedback
- ☐ Expected turnaround times for assignments

For continuous/concurrent enrolment:
- ☐ Screening at registration
- ☐ Flexible timelines and monitoring late starters
- ☐ Pyramid of interventions
- ☐ Procedure for course rollovers
- ☐ Support mentor at primary school

Inclusive design (Universal Design for Learning):
- ☐ Videos transcribed or CC
- ☐ Accessibility supports explained to students
- ☐ Images reflect diversity and inclusion
- ☐ Language is inclusive of culture and LGBTQ+ students

Assessment Integrity
- ☐ Plagiarism policy
- ☐ Plagiarism plugins (e.g. Turn-it-In)
- ☐ Onsite test writing options
- ☐ Secure online test writing/supervision options

A variety of instructional methods and materials are used:
- ☐ Content presented in multiple ways
- ☐ Use of rich media (video, podcasts, simulations, etc.) rather than all .pdf or Word
- ☐ Project-based, inquiry, constructivist learning

Digital Citizenship and ICT skills:
- ☐ Responsible digital citizenship encouraged
- ☐ Technology skills embedded in instruction
- ☐ Software/ apps reviewed for terms of use (data gathering/storage/use)

Synchronous Teaching and Support
- ☐ Daily online synchronous instruction for E/JH
- ☐ Scheduled open office times for HS
- ☐ "Office Hours" available for live support
- ☐ Sessions are recorded and linked in course
- ☐ Face-to-face options for students

Course completion supports:
- ☐ Connecting with each student and family
- ☐ Frequent, prompt academic feedback
- ☐ Early Intervention for non-starters (first week)
- ☐ Timelines and pacing support for students at risk
- ☐ Available support services, e,g, counselling

Sound Instructional Design:
- ☐ Logically organized
- ☐ Grade-level appropriate language
- ☐ Icons, symbols, visual rather than mostly text
- ☐ Outcomes-based, reasonable time allotment
- ☐ Teacher presence evident throughout

Teacher Presence in:
- ☐ Course set up (welcome video, photo, contact info, personalized appearance of the course)
- ☐ Interactions during course (prompt replies, forums, weekly messages in course or email)
- ☐ Monitoring student progress (tracking pace, identifying students at risk, connecting with families)

References and Additional Resources:

iNACOL (International Association for K-12 Online Learning) - *National Standards for Quality Online Courses* (https://goo.gl/B2M72b), *National Standards for Online Programs* (https://goo.gl/tBpc08) and *National Standards for Quality Online Teaching* (https://goo.gl/yBp4Ns) **Athabasca University** - *Community of Inquiry* (https://coi.athabascau.ca/) **Quality Matters** (https://www.qualitymatters.org/), **ISTE** -*Digital Citizenship in Schools* (http://www.iste.org/docs/excerpts/DIGCI2-excerpt.pdf)

References

Alberta Education. *Funding Manual for School Authorities: 2017/18 School Year.* Retrieved from https://education.alberta.ca/funding-framework-for-k-12/funding-manual/. Accessed October 8, 2018.

Alberta Education. *Online Learning Program Directory.* Retrieved from education.alberta.ca/online-school-directory. Accessed April 11, 2018.

Alberta Education. *Provincial Approach to Student Information Community Site.* Retrieved from https://account.education.alberta.ca/Pas.Account/en-CA?p=Uy5DpRPW5eJNYMOqaGaXBg2. Accessed April 11, 2018.

Alberta Education. *Teacher Growth, Supervision and Evaluation Policy.* Retrieved from https://education.alberta.ca/media/1626684/tgse.pdf. Accessed April 18, 2018.

Alberta Education. *What is a Response to Intervention Approach?* Retrieved from https://education.alberta.ca/response-to-intervention/what-is-a-response-to-intervention-approach/. Accessed April 11, 2018.

Archambault, L. & Kennedy, K. (2018). Teacher preparation for K-12 online learning. *Handbook of Research on K-12 Online and Blended Learning.* Ed. Richard Ferdig, Kathryn Kennedy. Retrieved from https://figshare.com/articles/Handbook_of_Research_on_K-12_Online_and_Blended_Learning_Second_Edition_/6686813 October, 2018

Clark, T. & Barbour, M. (2015). *Online, Blended, and Distance Education in Schools.* Published by Stylus, Sterling, VA.

College of Alberta School of Superintendents (2010). *The Alberta Framework for School System Success.* Published by Friesens, Altona, MB.

Fullan, M. and Quinn, J. (2015). *Coherence: The right drivers in action for schools, districts, and systems.* Corwin: a Sage Company.

Government of Alberta and Government of Canada. *Alberta Computers for Schools.* Retrieved from http://www.cfsalberta.ca/index.php. Accessed April 11, 2018.

High School Flexibility Enhancement: A Literature Review. Retrieved from https://education.alberta.ca/media/1626476/hsflexiblityenhancement-aliteraturereview.pdf.

LearnAlberta. *Supporting English Language Learners.* Retrieved from https://www.learnalberta.ca/content/eslapb/index.html. Accessed May 11, 2018.

Michigan Virtual University (2015). *Challenges of Virtual School Leadership (webinar).* Retrieved from: https://mvlri.org/research/webinar-podcast/challenges-of-virtual-school-leadership/.

Miller, T., and Ribble, M. (2010). Moving beyond bricks and mortar: Changing the conversation on online education. *Educational Considerations*, 37 (2): 3–6.

Pappas, C. & Buff, T. (2018). eLearning Industry. *23 Inspirational eLearning Quotes for eLearning Professionals.* Retrieved from https://elearningindustry.com/inspirational-elearning-quotes-for-elearning-professionals.

Patrick, S., Edwards, D., Wicks, M., & Watson, J. (2012). *Measuring quality from inputs to outcomes: Creating student learning performance metrics and quality assurance for online schools*. Vienna, VA: International Association for K-12 Online Learning. Retrieved from http://www.inacol.org/wp-content/uploads/2015/02/iNACOL_Quality_Metrics.pdf.

Richardson, J., LaFrance, J., Beck, D. (2015). *Challenges of Virtual School Leadership.* Retrieved from https://www.researchgate.net/publication/273910314_Challenges_of_Virtual_School_Leadership.

The New Media Consortium and the Consortium for School Networking (2017). *Horizon report: 2017 K-12 edition.* Retrieved from https://cdn.nmc.org/media/2017-nmc-cosn-horizon-report-k12-EN.pdf.

Images

Canada map (p. 7). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/map-canada-provinces-territories-2088308/. Accessed February 23, 2018.

Counselling image (p. 19). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://unsplash.com/photos/-AXDunSs-n4. Accessed April 11, 2018.

Documents on the tabletop (p.22). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/chart-graph-finance-financial-data-2785932/. Accessed February 23, 2018.

Female in coffee shop using laptop (p. 5). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/laptop-computer-electronic-2569306/. Accessed February 23, 2018.

Laptop and phone (p. 15). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/office-tax-business-finance-620822/. Accessed February 23, 2018.

Learning commons image (p. 12). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://commons.wikimedia.org/wiki/File:Learning_CommonsITESMCCM04.JPG. Accessed April 11, 2018.

Pen and paper (p.33). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/document-file-business-accounting-1446078/. Accessed February 23, 2018.

Students looking at map on screen (p. 8). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/computer-the-student-students-491760/. Accessed February 23, 2018.

Women in Meeting (p.37). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://unsplash.com/photos/qro0STJ0yhQ. Accessed May 23, 2018.

Working at desk with pencil (p. 27). This work is licensed under a Creative Commons 0 1.0 Universal Public Domain Dedication license. https://pixabay.com/en/office-two-people-business-team-1209640/. Accessed February 23, 2018.