



COVID-19 and Transfer

The effects of COVID-19 on transfer and articulation within the BC Transfer System

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Introduction

In March 2020, the COVID-19 pandemic resulted in the physical closure of British Columbia's post-secondary institutions. Courses and programs were moved entirely online, and students, faculty members, administrators and staff all worked remotely. By fall 2020, some programs and courses were able to resume limited in-person instruction, and other programs were gradually able to return to face-to-face classes during late 2020 and early 2021. But the majority of post-secondary courses and programs, along with institutions' operations and administrations, remained online until the summer of 2021. BC's provincial government expected BC post-secondary institutions to plan for "a full return to on-campus teaching, learning and research" in September 2021 (Government of British Columbia, 2021), and in the fall 2021 semester, most institutions were offering face-to-face courses on campus along with online courses.

This report was commissioned by BCCAT's Transfer and Articulation Committee (TAC) to serve as a historical record of the changes implemented, temporarily or permanently, at institutions during COVID-related closures, and to provide information and guidance if similar situations or issues arise in the future.

The rapid change to entirely online learning in spring 2020 affected many aspects of BC post-secondary education. Because the campus closures and the quick transition to online learning across the province were so unusual and unprecedented, many BC post-secondary institutions sought guidance on how to manage these changes, and wanted to know how other institutions were responding to this new reality. In mid-March 2020, the BC Council on Admissions & Transfer (BCCAT) started a COVID-19 "system news" information page (bccat.ca/systemnews) on its website. The page shares information and updates about COVID-related changes at BC Transfer System member institutions, and provides information in response to frequently asked questions. The page contains links to each BC Transfer System member institution's publicly posted information about its own COVID-related measures, and information from BCCAT, based on BCCAT and BCTS policy, addressing transfer-related issues.

There are still concerns about the system-wide and long-term impacts of the COVID-related closures on BC's post-secondary environment. The purpose of this report is to identify and describe COVID-related changes at BC post-secondary institutions and within the BC Transfer System during the 2020-21 academic year: in particular, changes that could potentially affect transfer agreements and student mobility. This report was commissioned by BCCAT's Transfer and Articulation Committee (TAC) to serve as a historical record of the changes implemented, temporarily or permanently, at institutions during COVID-related closures, and to provide information and guidance if similar situations or issues arise in the future.

There are five areas in which COVID-related changes may have affected transfer and articulation in BC:

- changes in course delivery methods;
- changes in course components;
- grading;
- articulation committee meetings; and,
- student equity.

A separate research project, commissioned by BCCAT’s Admissions Committee, is examining registrarial responses to COVID-related changes. The effect of COVID on institutional policies and practices overseen by registrars will be addressed by that research.

This report starts with an overview of COVID-related transfer-related changes in other jurisdictions, and then examines each of the five areas of impact.

COVID-Related Transfer Changes in Other Jurisdictions

Three earlier research projects provide some insights into COVID-related changes to transfer practice and policies outside British Columbia.

In spring 2020, the American Association of Collegiate Registrars and Admissions Officers (AACRAO) conducted a “snapshot impact survey” of its members on the impact of COVID on their institutions (AACRAO, 2020). The survey included questions about how transfer credit requests were being evaluated at the undergraduate and the graduate level. The responses relating to undergraduate transfer credit are summarized in the table below.

Table 1: AACRAO Survey Responses

	Standard practice, no change	Change already made	Under consideration	Not under consideration at this time
Counting pass (P) and other equivalent non-qualitative grades as earned credits (n=451)	185 (41%)	108 (24%)	113 (25%)	45 (10%)
Excluding grades posted for terms impacted by COVID-19 from transfer GPA calculation (n=390)	137 (35%)	16 (4%)	47 (12%)	160 (41%)
Accepting pass (P) and other equivalent non-qualitative grades as meeting major requirements (n=442)	128 (29%)	133 (30%)	128 (29%)	53 (12%)
Accepting pass (P) and other equivalent non-qualitative grades as meeting general education requirements (n=438)	153 (35%)	131 (30%)	109 (25%)	44 (10%)
Accepting pass (P) and other equivalent non-qualitative grades as satisfying pre-requisites and co-requisites for other courses (n=449)	144 (32%)	121 (27%)	135 (30%)	45 (10%)
Accepting pass (P) and other equivalent non-qualitative grades as meeting upper-division requirements (n=389)	121 (31%)	113 (29%)	105 (27%)	51 (13%)

(Source: AACRAO, 2020)

Approximately one-third of the institutions surveyed by AACRAO made at least one adjustment to their transfer practices in response to COVID-related changes. The most common adjustments were accepting courses transferring with pass (P) grades or equivalents as meeting requirements for majors and for general education electives. The largest differences in responses were around excluding grades from transfer GPA calculations if those grades were earned during semesters affected by COVID-19. Forty-eight percent of respondents reported that their institutions were not considering such a change, while only four percent indicated that their institution was planning to exclude these grades.

In spring 2021 York University surveyed Canadian post-secondary institutions about their responses to COVID-19 (Fernandez, 2021). The 32 participants in the survey represented 14 universities, 16 colleges, and two institutes. 17 respondents reported that their institution had changed its grading practices during semesters affected by COVID-19, with six institutions adding notations to student transcripts to indicate the changes. Five institutions indicated that pass/fail or credit/non-credit grades for transferring students would be assessed differently than letter grades, but only one institution indicated that non-letter grades would not be accepted for transfer credit.

At the end of August 2021, the National Student Clearinghouse Research Center in the US released a report examining US undergraduate student transfers between July 2020 and June 2021 (Bobbitt, Causey, Kim, Lang, Ryu, & Shapiro, 2021). The data used for the analysis in this report represented 2.1 million transfer students and 11.8 million non-transfer students. During the period covered by the data, transfer student enrollments (enrollments by transferring students at receiving institutions) dropped by 8.4%, while enrollments by students continuing at the same institution dropped by 2.9%.

The highest rate of decline in any type of transfer was in lateral transfers (transfer between two-year institutions or between four-year institutions) which decreased by 11.9%, compared to a decrease of 3.9% the previous year. The rate of “upward” transfers (transfers from two-year institutions to four-year institutions) remained relatively steady; the rate decreased by 1.3%, compared to a decrease of 1.2% the previous year. Transfer enrollments decreased more for male students than for female students, and decreased more for Black students than for students in other racial and ethnic demographic groups. The report also noted that the rate of stop-outs (students not enrolling at all for a year or longer) was declining in the year prior to the pandemic, but rose by 5.2% during the pandemic.

These studies show that institutions responded to COVID-19 conditions in different ways, and some of those responses have the potential to affect transfer and articulation activity; student mobility patterns also appear to have been affected by COVID-related closures. The next section of this report will assess whether similar effects can be seen in the BC Transfer System and in BC students’ mobility.

COVID-Related Transfer Changes in BC’s Post-Secondary System

The information in this section of the report is primarily drawn from the information posted on BCCAT’s COVID-19 information page; from the institutional information linked on that page; from BCCAT and Student Transitions Project (STP) data; and from the minutes of BCCAT articulation committee meetings. Cached versions of some institutions’ websites were also reviewed, in order to retrieve information that was posted but has since been replaced with more recent information.

It should be noted that almost all of the activities within BCCAT’s Transfer Credit System (TCS) were able to continue during shutdowns, because almost all of this activity was already online. The TCS is the application and workflow that enables BC Transfer System (BCTS) member institutions to articulate agreements and publish them in the BC Transfer Guide (BCTG). The activities conducted through the TCS include distributing transfer credit or re-articulation requests with documentation, assessing and making decisions on requests, and posting completed agreements on the BCTG website. The ability to carry out these activities was not significantly impacted during campus closures, as long as registrarial staff were able to connect to the TCS and to the online internal workspaces where they carried out transfer-related tasks at their own institutions.

Transfer Activity in BC during COVID-19 Closures

As part of the research for this report, we explored whether there were changes in the amount of transfer activity in the BC post-secondary system during and after the move to online learning. The data we examined covered April 2020 through July 2021. Two types of data are relevant to identifying any trends:

- the number of transfer credit requests that were entered and assessed through the TCS, including requests for amendments or updates to existing articulation agreements; and,
- the number of credits transferred by students, as recorded in the data submitted to the provincial Student Transitions Project (STP).

When all courses and programs were fully or mostly online, students could enrol in programs or courses at other institutions that they might have not had access to in person. However, during most of the period covered by these data, there was no clear date for a return to primarily face-to-face course delivery, and no clear idea of what post-pandemic university or college courses would look like. Students might have been wary about enrolling elsewhere or transferring courses under these uncertain conditions. The sudden change to online programming across the entire BC post-secondary system also meant that students who preferred face-to-face courses to online courses would not have had the option of taking a face-to-face course. Face-to-face instruction was either non-existent or limited to specific types of programming, such as trades and vocational programs.

Determining the amount of credits transferred while courses were mostly online, and assessing whether that amount differed significantly from previous periods, is challenging because of differences in reporting cycles within institutions and within the STP. The STP tracks student transitions and mobility within the BC Transfer System. The institutions participating in the STP submit their data annually, with the most recent data submission covering registrations up to and including the Summer 2020 semester. Thus, these data will only capture student mobility activity during the COVID-related closures in Spring and Summer 2020; while these data may provide some insights on student mobility during this period, they do not cover the entire closure period, and thus may not be a valid basis for pre- and post-lockdown comparisons. Meaningful comparisons may be more feasible after the 2020/21 data are submitted. Since the STP conducts mobility analyses every two years, the most comprehensive analysis of the impact of the pandemic will likely include data up to and including registrations in 2022, with that analysis to be released in the fall of 2023.

The other potential source of information on transfer activity is the data from the TCS, which are somewhat easier to collect since activity in this system occurs in real time and can easily be summarized and compared. Quarterly data were collected from the TCS on the number of course articulation requests that were posted prior to and during the pandemic-related closures. These data are presented in Table 2.

Table 2: Course Articulation Requests Posted to TCS by Quarter, 2018-2021

	Q1 (January-March)	Q2 (April-June)	Q3 (July-September)	Q4 (October-December)	TOTAL
2018	206	359	246	333	1044
2019	236	320	217	207	980
2020	351	514	206	141	1212
2021	286	611	262*	n/a	1159 [Q1-Q3]

(Source: TCS internal data)

*Data up to and including August 31

As shown in Table 2, there was a noticeable increase in the number of articulation requests in the first two quarters of 2020, and another noticeable increase in the second quarter of 2021. It is possible that the 2020 increases were due to students requesting transfer credit during the initial months of the pandemic-related closures. But as the closures continued through the rest of 2020, the number of transfer credit requests decreased to amounts comparable to previous years.

The increase in articulation activity in the second quarter of 2021 may be due to several factors. One factor may be students who took courses online at other institutions transferring credits or courses back to the institutions where they are currently enrolled. The other may be the BCTG expansion during that period, incorporating more than 60,000 international articulation agreements into the BCTG. The expansion may have motivated students or institutions to request articulation for courses that previously might not have been considered eligible for BCTG listing. Also, as the data in Table 2 show, the number of articulation requests usually increases in the second quarter of each year, when students planning to transfer in the fall apply to or are accepted at receiving institutions. That quarter also includes the period when most BCCAT articulation committees hold their annual meetings, and some articulation activity may occur as a result of discussions or information sharing at those meetings.

In summary, it appears that the pandemic-related closures did not significantly affect the amount of articulation activity in the BC Transfer System. The data submitted to the STP in the future may provide a more definitive perspective on this issue.

Changes in Course Delivery Methods

BCCAT's *How To Articulate* handbook (2018) states that “[g]enerally, institutions regard courses taken online or through distance education as equivalent to the same courses taken in a classroom setting....The principles used to assess transfer credit should apply to the assessment of all courses for which transfer is requested, regardless of the method of delivery” (p. 31). The handbook also suggests that the delivery method for a course at a sending institution should not be a consideration in whether a receiving institution grants transfer credit for that course, unless the receiving institution has a policy that affects whether an online or hybrid course is considered equivalent to the same course taken in a face-to-face setting.

The BCTS membership includes two institutions that deliver almost all of their courses online (Thompson Rivers University's Online Learning division and Athabasca University), in addition to many other member institutions offering face-to-face, online, and hybrid courses. However, when BC's post-secondary institutions switched to all-online instruction in March 2020 with no clear end date, some programs and departments expressed concerns about a potential lack of equivalency affecting the validity of existing transfer agreements. For example, a transfer agreement for a course with a laboratory component might have been established on the implicit assumption that the laboratory component would be delivered in person at both the sending and the receiving institution.

At some institutions, there were discussions around separating the laboratory component of some courses from the rest of the course content, and assigning parts of the course's overall transfer credit to separate parts of the course. For example, for a course that transferred with four credits, it was proposed that one transfer credit would be assigned to the lab-based work and three transfer credits would be assigned to the rest of the course content and activities. A transferring student would only receive all four transfer credits for the course if or when they completed the lab work in a face-to-face setting.

In early May 2020, BCCAT posted this guidance on its COVID-19 information page.

Normally, a change in a course's credit value requires a re-articulation to all institutions that have previously articulated the course. Some institutions will only grant the same amount of credits for a transferred course that the course has at a sending institution.

If institutions decide to split 4-credit courses with labs into separate 3-credit and 1-credit courses – with 3 credits for the course and 1 credit for the lab - both the course and the labs would require re-articulation with system counterparts. Such re-articulation requests can be managed through BCCAT's Transfer Credit System (TCS) by following up directly with the designated Institutional Contact Person to make arrangements. This may or may not result in a change to existing articulation agreements.

It would be prudent to have detailed discussions both within an institution and with external institutions, especially receiving institutions, before deciding to split courses from their labs.

As time passed and offering courses online became the temporary norm in the BC Transfer System, the issue of a potential lack of equivalency between courses or course components became less critical. BCCAT is aware of only one set of transfer agreements that were modified during this time to separate credit for lab-based components from credit for other course components.

Changes in Course Components

An issue related to changes in course delivery methods was changes to course components. The rapid change to online instruction meant that face-to-face course components had to be redesigned by instructors on short notice. For some courses, instructors took existing course components and adapted them for online delivery. For other courses, instructors developed online activities that were different from those used in the classroom, but which covered the same content or addressed the same learning outcomes. Instructors who used the latter approach were sometimes constrained by the types of equipment or supplies that students might have access to at their homes, and had to design online activities within those parameters.

At some articulation committee meetings in 2020 and 2021, representatives expressed concerns that different course activities, even if they were all designed around the same content or learning outcomes, would result in students having different levels of expertise in supposedly equivalent courses. Some representatives felt that these differences could disadvantage transferring students, who might enter other institutions or subsequent courses without having the expertise that completion of the transferred course was assumed to represent. However, the majority of participants in these discussions seemed to feel that instructors were doing the best they could under unusual and challenging circumstances, and that any deficiencies in students' knowledge from different course activities were unlikely to significantly affect students' subsequent academic success. BCCAT is not aware of any articulation agreements that were modified or cancelled because of changes in course components.

Grading

Changes to grading practices as a result of courses going online could affect course transferability in two ways: changes to evaluation components (i.e. changes in the criteria or the weighting of criteria used to evaluate students' academic performance) and changes to the types of final grades awarded.

It is difficult to assess the impact of any changes to course evaluation components, since these changes tend to occur at the level of the individual section or class and may not be consistent across the entire course (with the exception of institutions or programs that mandate similar weighting of evaluation criteria for all course sections). If evaluation criteria were permanently changed for an entire course, this change would likely have to go through an internal institutional approval process; if the course was transferrable, the revised course outline would also have to be submitted to receiving institutions for re-evaluation through the TCS.

Discussions at 2020 and 2021 articulation committee meetings indicated that some instructors temporarily changed their course evaluation criteria or criteria weighting to reflect the realities of the online teaching environment. For example, a final examination, which could be difficult to administer securely or at a time that was feasible for every student, might be replaced with a case-based exam, a take-home exam, or an extended essay. It is unclear whether such changes will be temporary or permanent. Some articulation committee representatives indicated that while their course evaluation criteria were changed out of necessity, the adjusted criteria seemed to result in more accurate or equitable assessments of students' academic performance.

A more visible change to grading was temporary alterations to institutional grading schemes or policies. At most institutions, the impetus for these changes came primarily from requests by students and faculty members, who recognized that students' grades might be affected by several factors.

- The switch to online learning mid-semester. At most institutions, the change to online learning took place during the semester that began in January 2020; courses started out as face-to-face courses and then became online courses during the last few weeks of the semester. At some institutions, the change also included a temporary mid-semester suspension of classes to give instructors time to put their courses online;
- Public health stay-at-home and shutdown orders. These restrictions limited students' access to campus and to other resources that may have supported their academic work (e.g. public libraries);
- Disruptions to students' other activities, such as jobs and household responsibilities;
- K-12 schools and many workplaces going online, which may have affected the amount of time that students were able to spend on online courses;
- The reality that some students prefer face-to-face learning and do not want to take courses online, but ended up in online courses because of circumstances beyond their control;
- Operations and structures in online courses that could affect students' learning, such as students being located in many different time zones, unreliable Internet access, and student or instructor unfamiliarity with using online course platforms;
- Students experiencing pandemic-related stress and mental health challenges; and,
- New opportunities for students to engage in academic misconduct in an online environment (e.g. posting exam questions on "homework help" sites during real-time online exams).

These factors led many institutions to consider temporary adjustments to their grading schemes and/or to the criteria for using specific types of course grades or transcript notations. Every BC Transfer System member institution has policies or procedures outlining transcript notations that can be used when unforeseen circumstances affect a student's academic performance. These include "W" (withdrawal) or "WE" (withdrawal in extenuating circumstances) notations for when a student withdraws from a course before completing it; "I" (incomplete) or "IP" (in progress) notations for when a student did not complete the coursework but has arranged to submit the remaining work; and "AE" or "AEG" (aegrotat) notations indicating a "compassionate pass" granted in unexpected and serious situations. "C" or "CR" (credit) and "NC" (no credit) grades are also used at most institutions for courses in which student performance is assessed on a pass/fail basis, or used when other circumstances make it difficult to use a letter grade as a meaningful representation of a student's academic performance.

Thus, BC Transfer System member institutions already had ways to accommodate grade adjustments in unforeseen circumstances. However, these policies and procedures were intended to address occasional situations, not to manage large-scale changes involving classes across the entire institution. This intent can be seen in the multiple approvals that most institutions require before one of these notations appears on a student's transcript; it could be a considerable administrative burden to obtain that many approvals for large numbers of requests for these grades.

Additionally, at some articulation committee meetings, concerns were expressed that allowing pandemic-related grade adjustments could lead to misuse by students. For example, a student at risk of failing a class, or at risk of receiving a lower grade than they expected, might claim pandemic-related circumstances as a reason for them to pass the course or receive a higher grade.

BC post-secondary institutions responded to these grading and transcripting issues in different ways. Table 3 (on page) presents examples of some of these responses. Some institutions did not adjust their practices, and instead used existing policies and procedures to address any pandemic-related impacts on grading.

Many transfer agreements in the BC Transfer System, and many BC Transfer System institutional members' admission policies, require transferred or pre-requisite courses to have letter grades. The BC Transfer System's long-standing practice is that a student must receive a minimum of a P grade - either a "pass" or a "D", depending on the sending institution's grading scale - to be able to transfer a course (BC Transfer Guide, 2021). Students transferring courses to fulfill pre-requisite or co-requisite requirements at many sending institutions are required to receive a course grade of "C" or higher. Individual institutions or programs may also have additional policies setting a minimum course grade that is required to receive transfer credit. Generally, in order to enrol in a more advanced course, transferring students are expected to achieve the same grade in the pre-requisite course that would be required of a student already enrolled at the receiving institution.

While these policies ensure consistency and clarity across the BC Transfer System, they are also based on the assumption that letter grades are used to indicate student performance. Even under non-pandemic circumstances, when there are valid reasons to record a notation rather than a letter grade, receiving a non-letter grade may lead to a student not receiving transfer credit or not being admitted to a program at another institution. A non-letter grade may not be recognized as meeting minimum requirements for admission, for course transferability, or for course completion.

BCCAT issued this guidance on its COVID-19 information page in May 2020:

Some BC Transfer System member institutions are providing options to record pass / fail or credit / non-credit grades for the current semester. Institutions and instructors should be aware that some receiving institutions or programs may not accept courses graded as pass/fail or credit/non-credit as meeting transfer, admission, or progression requirements. Institutions should consult system partners, especially receiving institutions, for information that can be used to advise students who may be planning to transfer.

Some institutions are assuring current students that their progression, pre-requisite requirements, academic standing, and scholarship eligibility will not be negatively impacted by temporary operational changes, such as alternate grading options. Institutions may consider providing similar assurances to students planning to transfer to their institution in future semesters.

This is particularly important for students planning to transfer, who may be asked to confirm fairly soon whether they will receive an "alternate grade" of P/F or Credit/Non-Credit. It is important for these students to have clarity regarding whether alternate grades will be recognized at receiving institutions.

Articulation Committee Meetings

Historically, the 65 discipline-specific articulation committees in the BC Transfer System have met once a year in person, with most meetings taking place between March and June. BC's post-secondary institutional closures and switch to online courses in spring 2020 occurred around the time when most articulation committees would be planning for their annual meeting. As most articulation committee representatives are faculty members, this meant that meeting preparation was taking place when those attending or planning articulation committee meetings suddenly had unexpected and extensive extra work to move their courses – both in progress and upcoming – to an online environment. Thus, some articulation committees decided to postpone their 2020 meetings, while others decided to replace the scheduled in-person meeting with an online meeting. Forty-five articulation committees met in 2020 and 63 committees met in 2021; all of these meetings were held online.

Table 3: Examples of Pandemic-Related Adjustments to Grading or Transcribing Practices at BC Post-Secondary Institutions

Institution	Type of Adjustment	Length of Adjustment
BC Institute of Technology	If an applicant for admission receives “pass” instead of a letter grade, “please submit your grade history and a letter from your institution stating the change of grading practice with your application. We will do our best to grant you acceptance while ensuring you satisfy the entrance requirements to be successful in your program.”	None stated
Simon Fraser University	Elective Grading System allowing students to opt for a pass/credit/no credit grade instead of a letter grade in a course. Only applicable to a maximum of 8 units (credits) per semester and a maximum of 12 units (credits) over three semesters. Students do not see their final course grade before selecting this option for a transcribed grade.	Spring, Summer and Fall terms 2021. Opt-in and opt-out deadlines to use this option are established for each semester.
University of Victoria	Notations added to all students’ transcripts. Spring 2020: “DISRUPTION OF STUDIES DUE TO COVID-19”. Summer and Fall 2020 and Spring 2021: “THIS TERM TOOK PLACE DURING THE COVID-19 PANDEMIC”.	Spring, Summer and Fall 2020 semesters, and Spring 2021 semester.
University of the Fraser Valley	Students have the option of accepting their final grades, petitioning for a CR (credit/pass) to be transcribed for any passing grade, or requesting a Withdrawal (W) without academic penalty up to May 8, 2020.	Spring 2020 semester (January-April)
University of Northern BC	Will accept P grades “as an indication of student eligibility to meet pre-requisite requirements for course registration and progression in degree programs.” Because of accreditation requirements, Nursing and Social Work students can only request passing grades for courses in which they earned a grade of C or higher, and Education students can only request passing grades for courses in which they earned a grade of C+ or higher.	Winter 2020 semester (January-April)

Like online classes, articulation committee meetings moved online because of a lack of alternatives, not because of a conscious decision to change formats. While the online meeting format facilitated broader participation, several articulation committee chairs and institutional representatives noted that the lack of face-to-face interaction made it difficult to build social networks and personal relationships, which they felt was a major benefit of articulation committee participation. Several also mentioned that this lack of interaction was particularly critical for new representatives on the committees, in that newcomers would not have the same socialization experience online that they would in a face-to-face meeting. In their view, this might have future negative implications for articulation committee meeting attendance and participation.

In July 2021, BCCAT conducted an informal survey of articulation committee chairs to ascertain how many committees were planning to continue with online meetings. Thirty-one of the 56 survey respondents indicated that their committee had decided on a format for its 2022 meeting; 25 of those committees were planning to meet in person, and six committees were planning a combined online and in-person meeting. Thirty-two respondents expressed a personal preference for in-person meetings, because of better opportunities to build connections and because it was easier to work collaboratively in person. Social events such as field trips and campus tours were also identified as important parts of in-person meetings that are not easily replicated online. Eighteen respondents preferred online meetings because representatives attending the meetings did not need to incur travel costs and time away from work or home, and because, as chairs, they found online meetings to be more focused and efficient. (The complete results of this survey can be obtained on request from BCCAT.)

BCCAT’s articulation committees and their annual meetings, as well as the committees’ activities throughout the year, are an essential part of the BC Transfer System. They support the development of disciplinary knowledge and inter-institutional relationships that, in turn, support the development and maintenance of transfer agreements. Holding annual articulation meetings online for a year or two years is not likely to permanently damage the personal and institutional connections built through in-person articulation committee meetings, but BCCAT will continue to monitor this situation. It should be noted that BCCAT makes recommendations to articulation committees on meeting-related issues such as location, timing, and format, but decisions on these issues are made by the committees themselves.

Long-Term Impacts on Student Equity

The pandemic-related closures and the switch to online learning exposed multiple inequities in BC students' access to post-secondary education. Some participants in the BC post-secondary system would say, with justification, that these inequities have always existed and that the pandemic simply made them more visible. Not all of the conditions discussed below have a direct relationship to transfer activity in BC. However, they are mentioned here because of their potential effects on students' academic performance, which, in turn, may impact students' ability to transfer courses or to be admitted to another institution.

Internet Access and Online Skills

Successful participation in online courses requires the student to have access to the Internet, and to have an Internet connection with enough speed and capacity to run programs such as Blackboard or Microsoft Teams. When courses moved online, many BC post-secondary institutions discovered that Internet access was a challenge for more than a few students, even those in urbanized areas. The BC government's own statistics show that "only 38% of rural communities and 38% of rural Indigenous communities have access to the recommended [50 Mbps] broadband internet speeds" (Connectivity in BC, 2021). It was also apparent that some students did not have their own Internet connection and were relying on free Wi-Fi connections such as those available at malls, coffee shops, public libraries and the post-secondary campus itself. These connections became unavailable when these facilities were closed.

Some BC post-secondary institutions were able to partially address issues with Internet access by broadening the range of Wi-Fi coverage on their campuses: for example, expanding Wi-Fi coverage to include campus parking lots. This meant that students with laptops and access to a vehicle could park on campus and do coursework on their laptops. However, other restrictions on students' ability to access the Internet, such as slow connection speeds, could not be addressed by institutions, and some students' academic performance may have been negatively impacted as a result.

Students who had not previously taken online courses or courses with online components, or who were not familiar with their institution's online course platforms, may also have experienced disadvantages in the online environment. This issue was particularly critical at a time when many instructors were overwhelmed with the work of putting courses online on short notice, and when institutional IT departments were managing the process of suddenly moving large numbers of courses online. Institutions may have lacked the capacity to fully support students who needed additional technical assistance to succeed in online courses.

Computer Equipment

Successful participation in online courses requires a student to own, or have access to, a computer with a minimum amount of storage capacity and a relatively up-to-date operating system. Athabasca University and Thompson Rivers University's Online Learning division both recommend that students' computers have at least a Windows 10 or Mac OS 10.7 operating system and be able to run Microsoft Office, a web browser, and Adobe Acrobat, in addition to having a webcam and microphone (Athabasca University, 2021; Thompson Rivers University-Online Learning, 2021). Both institutions also recommend that students have a high-speed Internet connection.

The move to online courses revealed that many students

- did not have their own computers;
- had computers that were not capable of running online course software, or that ran that software very slowly;
- relied partially or completely on on-campus computing facilities and equipment to complete online coursework;
- relied on off-campus services, such as public libraries, to provide computer access or equipment; and/or
- were using devices such as smartphones or tablets that had Internet capabilities but which were not suitable for extensive or detailed online work.

Some BC Transfer System member institutions addressed these problems by, for example, loaning laptops to students, increasing the loan periods for computer equipment available for student use, and/or increasing the amount of equipment available for loan. However, these plans were only effective in addressing students' computer challenges if students were able to come to campus and if staff were available to manage the equipment loans.

Households and Living Arrangements

Successful participation in online courses requires students to have enough time to be part of online activities: for example, writing and posting on course discussion boards, or attending synchronous class sessions. During pandemic-related closures, many students at BC post-secondary institutions were living in households where other residents were also taking online classes – either post-secondary or K-12 classes – and/or working remotely at part-time or full-time jobs. In households with limited Internet access or with limited computer equipment, this could create challenges for students attempting to complete coursework, if computer time or access had to be shared with others who were also suddenly working or studying online.

The closure of K-12 schools and workplaces also affected students who are parents or who have other family or household responsibilities. Students with children in K-12 education often had to assist their children with online education, in addition to taking their own post-secondary courses online. Students with part-time or full-time jobs may have had to continue to work in person, or may have had to transition to online work. The challenges associated with both online and in-person work during pandemic-related shutdowns could have affected the time that students had available for their post-secondary coursework, and thus affected their academic performance.

Students living in other parts of the world also faced challenges in participating in online courses offered by BC post-secondary institutions. Time zone differences and classes with scheduled meeting times may have required students in some time zones outside BC to attend online classes in the middle of the night. This was exceptionally difficult if other household members were trying to sleep while students were attending online classes. Additionally, if these students were working during the daytime, also participating in online classes and exams very late at night or early in the morning could be very stressful, and may have affected their academic performance and their mental or physical health.

Privacy was another concern related to students' living arrangements. Many BC post-secondary institutions encountered privacy and legal issues related to the use of students' computer webcams and/or microphones during class activities and examinations. These discussions were particularly relevant in relation to BC's Freedom of Information and Protection of Privacy (FOIPOP) Act, which applies to post-secondary institutions as public bodies, and which establishes limitations on those bodies' "collection, use, disclosure and storage of personal information" (Office of the Information and Privacy Commissioner, 2015, p. 3). Personal privacy issues related to online classes included, for example, whether it was appropriate to use online third-party examination monitoring services, if it was unclear how data collected by those services would be accessed or analyzed; whether it was permissible to record online sessions in which students participated, or to post those recordings online; and whether requiring students to turn on laptop cameras during online class sessions compromised their personal privacy, as the cameras would show the student's home or personal space to the rest of the class. Students who did not want to use their computer's microphone or camera, or who were reluctant to be monitored online, may have experienced challenges in completing coursework or in taking online examinations, which in turn may have affected their course grades.

Conclusion

This report has outlined pandemic-related changes at BC post-secondary institutions during 2020 and 2021 that may affect transfer agreements and student mobility. As noted, full data on student mobility during pandemic-related closures are not yet available; a more thorough assessment of the closures' effect on student mobility will not be possible until those data are collected and analyzed. From BCCAT's perspective, it appears that most issues related to transfer agreements during the pandemic-related closures were resolved through informal discussion and information sharing, and that very few pandemic-related changes were made to existing articulation agreements. However, long-term effects of pandemic-related closures on student transfer and mobility may emerge around articulation committee participation and around student inequities that became more apparent during institutional shutdowns. BCCAT will continue to monitor the BC post-secondary environment for indications of these effects.

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