Improving the Accessibility of Remote Higher Education: Lessons from the Pandemic and Recommendations

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Executive Summary

The sudden shift to remote learning caused by the COVID-19 pandemic has had important implications for accessibility in postsecondary education. This report facilitates an understanding of those implications, including insight into the supports that students, especially those with disabilities, will need to succeed in an online learning environment during the 2020/21 academic year. It is informed by a mixed methods research strategy including: a survey of more than 600 students — about 200 of whom have a self-reported disability; a survey of disability support staff at Ontario colleges and universities; and interviews with more than 30 student representatives, community advocates and postsecondary instructors and staff.

Of our student survey respondents, on average more students with disabilities reported experiencing challenges once courses were rapidly moved online due to COVID-19. This is in contrast to both their experiences with previous in-person and online courses, as well as in contrast to students without disabilities. At the same time, our interview and survey data suggest a number of students who may not have previously identified as having an accessibility need, have recently found themselves facing challenges and in need of support or accommodations. Some of the challenges highlighted by our research include:

- Uncertainty about course expectations and how to access support
- Difficulty focusing, staying on top of readings and assignments, and understanding course material
- Inadequate access to accommodations and accessible material
- Difficulty communicating and building/sustaining relationships
- Inequitable access to, and problematic assumptions about, technology and internet
- Inaccessible assessments

Our research also highlighted advantages that many students encountered once courses moved online due to the COVID-19 pandemic — advantages they are optimistic will continue into the fall 2020 semester and beyond:

- Flexibility and choice
- Fewer physical, sensory, and for some, social barriers
- Anonymity navigating accommodations and services
- Innovative, inclusive pedagogy

Reflecting on the challenges and advantages highlighted by our research, as well as the advice of the stakeholders we engaged, we offer ten recommendations to instructors and staff at Ontario colleges and universities. The first three recommendations in particular, while brought to light by the pandemic and this research, are applicable to all postsecondary learning scenarios, now and in the future. Most recommendations, while particularly relevant to a remote learning context, will also be relevant when in-person courses resume.

Recognizing the intense pressures placed on instructors and staff, some of whom may be facing disability-related challenges themselves, we hope these recommendations prove useful and will be kept in mind for the long-term benefit of all students in Ontario.

Incorporate Universal Design for Learning (UDL) principles in all courses. Lean on your colleagues to do so.
Draw upon the expertise of local teaching and learning centres as well as Accessibility for Ontarians with Disabilities Act (AODA) offices and offices for students with disabilities to assist with embracing UDL principles. This can help relieve the burden on students (and instructors) who might have otherwise needed to seek out accommodations.

Empower students to make choices that suit their needs.
Communicate details of course delivery clearly — ahead of the semester — and share information about course requirements and participation expectations as soon as possible so that students can make informed choices about what works best for them.

Enable transferable skill development.
All students, not just those with disabilities or accessibility needs, will require specific transferable skills like time management and organization to be successful with remote and online learning. Instructors can enable these skills at the course level, while institutions can offer co-curricular opportunities to develop learning strategies.

Create certainty where you can.
Establish rules or etiquette for course participation. Provide resources about how to use technology tools. And provide a schedule or road map at the outset with clear deadlines for assignment and assessments.

Share information about how to access services and accommodations remotely.
Create a repository of comprehensive information about services/supports — likely the institutional website — that instructors and staff can direct students to. Ensure resources are accessible (i.e., easy to understand and compatible with assistive technology).

Find ways to facilitate engagement and meaningful interaction.
Experiment with ways of facilitating engagement among students, between students and instructors, between students and staff, and among staff and instructors. Share resources (no need to "reinvent the wheel").

Check in with students.
Consider polling students or finding other ways of inviting feedback that can inform small adjustments to courses and service delivery that improve engagement and outcomes.

For synchronous courses, consider recording and be mindful that chat tools can be distracting.
Recording lectures can remove the need for certain accommodations (e.g., note-takers). And the chat function, while helpful for engagement, can be distracting for some students if it is enabled during a lecture or presentation.

When in-person courses resume, protect immunocompromised students.
For those who are immunocompromised, good health hygiene will continue to be essential. Keep work spaces clean, continue to encourage regular hand washing, and be adamant that people should stay home if they have any cold or flu-like symptoms — to reinforce the point, avoid tying participation grades to being physically present.

Practice empathy.
Remember students may be struggling. Many are juggling multiple responsibilities and those who rely on regular medical, therapeutic or attendant care may be experiencing disruptions to the services they need. Explore whether changes can be made to courses (e.g., extended deadlines) and/or institutional polices or practices (e.g., waiving some registrar fees) to express more empathy this academic year.

We hope these recommendations are useful to instructors, staff and the students they serve. More than that, we hope these recommendations become a starting point for a much-needed, ongoing dialogue about how to improve experiences and outcomes for students with accessibility needs at Ontario's colleges and universities over the long term.

Introduction

The sudden disruption caused by the COVID-19 pandemic in March 2020 caused colleges and universities to adjust courses and assessments in record time. This abrupt shift from largely in-person to remote delivery[1] has brought accessibility issues to the foreground.

For some students, especially those with disabilities, adapting to the realities of remote delivery has been, and will continue to be, especially challenging. For others, the experience has highlighted opportunities to improve their overall learning experience. Institutions have legal and ethical obligations to mitigate the challenges that inaccessibility can pose to learning, and to make the most of opportunities to improve the accessibility of their courses and programs. The pandemic has accentuated the need to fulfill these obligations.

To support postsecondary institutions in meeting the accessibility needs associated with remote delivery, this paper offers insight into some of the challenges and advantages students may expect to encounter in the 2020/21 academic year. We note that many instructors and staff have themselves experienced the challenges outlined in this report, in addition to others. Acknowledging the phenomenal effort that many instructors and staff at Ontario's colleges and universities have already demonstrated in response to the COVID-19 pandemic, we offer this advice to support success among all students, including students with disabilities, during the pandemic and recovery.

Background

On March 17, 2020, the Government of Ontario declared a state of emergency in order to mitigate the spread of COVID-19 in the province. In the days that followed, Ontario's colleges and universities closed their physical campuses and carried out the remainder of the winter 2020 semester via remote delivery. As of August 2020, it is clear the fall 2020 semester will largely take place online as well.

The impacts of the COVID-19 pandemic on Ontario's postsecondary system are still evolving and yet to be fully understood. We do know that Canadian postsecondary students have experienced cancelled or delayed work placements, cancelled courses and loss of income due to the reduction of non-essential and summer job opportunities (Wall, 2020b; Doreleyers & Knighton, 2020; Wall, 2020a). We also know that in general, vulnerable groups with intersecting identities — including disabilities — will face disproportionate negative effects as our economic, health-care and education systems adapt to the pandemic (Ontario Human Rights Commission, 2020). To date, however, there has been little investigation into how the shift to remote delivery in late March 2020 affected the learning experiences of Ontario postsecondary students, particularly from an accessibility standpoint.

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1 We refer to the rapid transition from in-person/on-campus learning to an exclusively online learning environment due to the pandemic as "remote delivery." This is distinct from "online delivery" (i.e., when courses have been intentionally designed for an online environment, mindful of best practices).

Methodology

This paper is informed by three major data collection strategies: a student survey, stakeholder interviews and a survey of disability support staff. The voluntary, non-representative student survey was administered by Academica Group between May and June of 2020 to members of Academica's Student Vu panel who had completed the winter 2020 semester at an Ontario college or university. Approximately 200 of the 623 respondents have a self-reported disability. The survey asked students how their recent remote learning experiences compared, positively or negatively, to their pre-pandemic in-person and online learning experiences. This approach highlighted some of the challenges and opportunities for student success presented by the pandemic.

HEQCO also surveyed over 70 disability support staff at Ontario colleges and universities in July 2020, and interviewed more than 30 student representatives, instructors and staff between May and July of 2020. For a more detailed description of our methods, see *Appendix 1: Methodology*.

Limitations

It is important to note that participation in both of our surveys was voluntary. Neither the student survey sample nor the staff survey sample were representative, and students with self-reported disabilities were oversampled. Recognizing the likelihood of sample bias, we refrain from generalizing about the survey results and limit our survey analysis to descriptive statistics.

Unlike the student and staff stakeholder groups, instructors were not surveyed. Recognizing the urgency of this research, our restrictive timeline did not allow for an additional survey. While we did interview instructors, we note that reaching more instructors (particularly those with extensive online teaching experience) would uncover additional advice for accessible teaching.

It is also worth noting that the challenges, opportunities and advice presented here are not exhaustive, nor are they exclusively relevant to the unusual circumstances of the pandemic. And though the present study does not go into detail about how government or institutional policies could change to better serve students with disabilities, we note this is also an important area for future research and discussion.

Challenges Presented by Remote Learning During the Pandemic

The data collected through our surveys and interviews revealed a number of challenges that students, and to some extent instructors and staff, encountered when the winter 2020 semester moved online.

On average, more students with disabilities reported experiencing challenges once courses moved to remote delivery due to COVID-19, in contrast to both their experiences with previous in-person and online courses, as well as in contrast to students without disabilities. At the same time, our interview and survey data suggest a number of students who may

not have previously identified as having an accessibility need have recently found themselves in need of additional support or accommodations. We highlight some of these challenges below.

Uncertainty About Course Expectations and How to Access Support

Both our surveys and interviews highlighted uncertainty as a challenge — about when in-person courses will resume, about how to navigate multiple online learning platforms and resources, about how to access support and ultimately, about how to succeed with remote learning.

Roughly one quarter (23%) of all students surveyed expressed uncertainty as to what they needed to do to participate in their courses once remote delivery began. As Figure 1 indicates, students were considerably more certain about course expectations in their prior in-person and online courses. Asked about the fall 2020 semester, 97% of students with disabilities and 95% of those without reported that clear communication about course expectations, schedules and deadlines would be extremely or very important to their success.

Figure 1: "I understood what I needed to do to participate in my courses…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

I understood what I needed to do to participate in my courses…
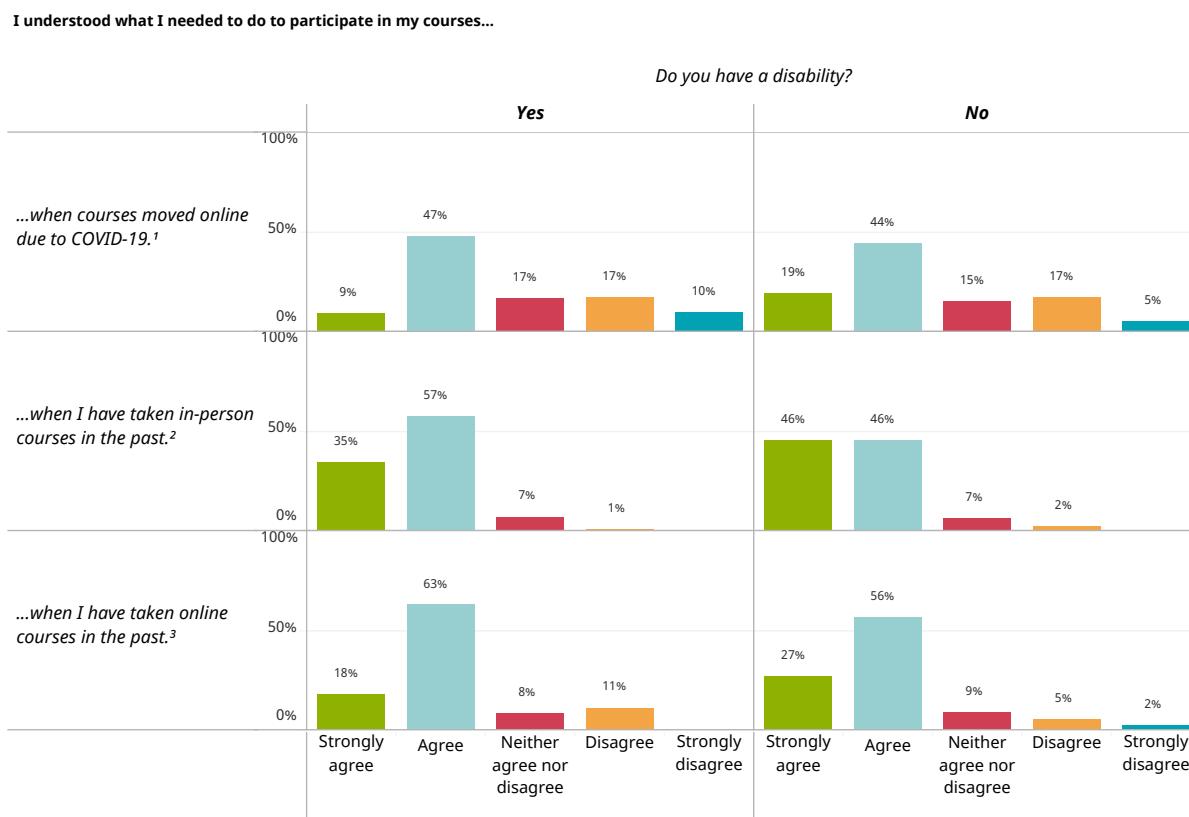
Students who selected "Not applicable" in response to a given question are excluded from that distribution.

[1] *Students with disabilities, n=205. Students without disabilities, n=411. Kruskal-Wallis H test (α=0.05): χ2(1)=7.60, p=0.01.*
[2] *Students with disabilities, n=207. Students without disabilities, n=397. Kruskal-Wallis H test (α=0.05): χ2(1)=4.85, p=0.03.*
[3] *Students with disabilities, n=84. Students without disabilities, n=188. Kruskal-Wallis H test (α=0.05): χ2(1)=2.09, p=0.15.*

Students also expressed uncertainty about where to access counselling or advising once the winter 2020 semester moved online: 53% of students with disabilities and 40% of those without disagreed or strongly disagreed with the statement that they knew where to go for counselling or advising during the pandemic (Figure 2). Just 25% of students with disabilities indicated that they knew where to access these services during the same period. The data suggests this uncertainty was much less pronounced prior to the pandemic — regardless of whether students were taking online or in-person courses.

Figure 2: "I knew where to go for counselling or advising if I needed it…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement
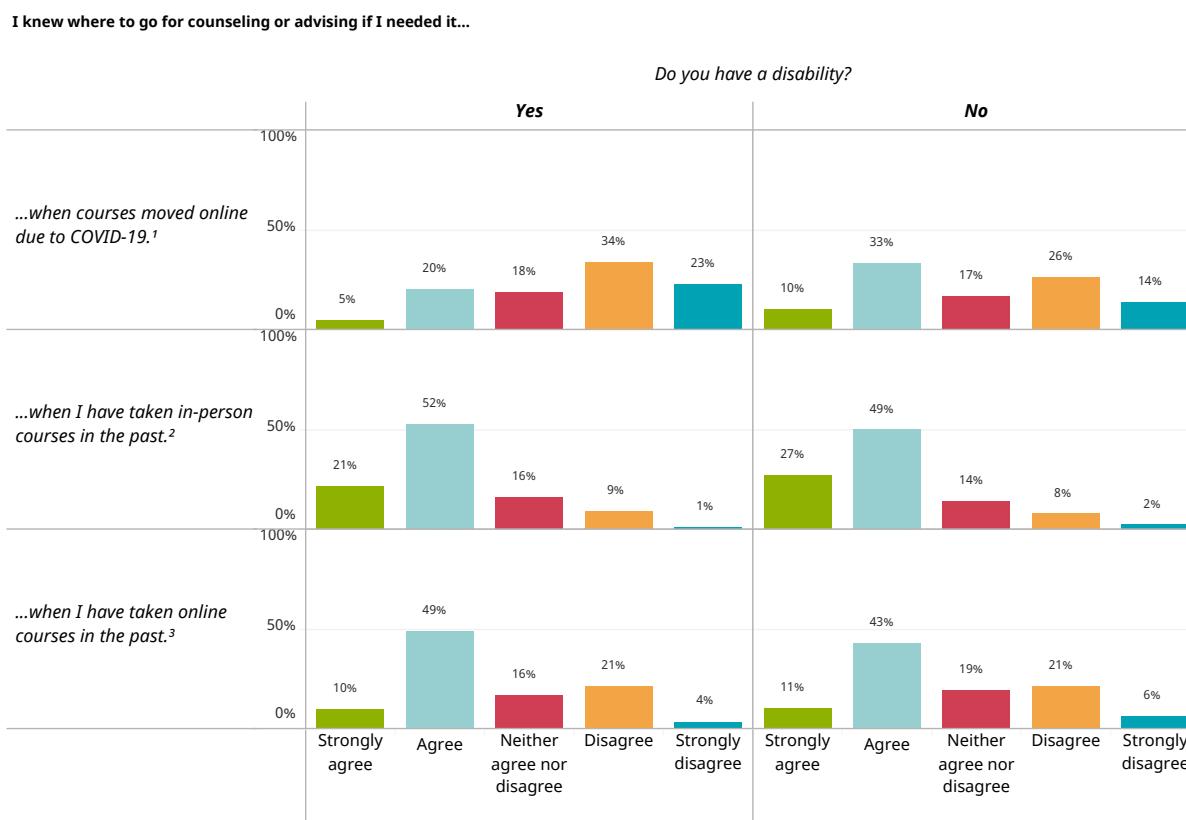
Students who selected "Not applicable" in response to a given question are excluded from that distribution.

[1] Students with disabilities, n=202. Students without disabilities, n=397. Kruskal-Wallis H test (α=0.05): χ2(1)=20.55, p=0.00.

[2] Students with disabilities, n=205. Students without disabilities, n=385. Kruskal-Wallis H test (α=0.05): χ2(1)=1.63, p=0.20.

[3] Students with disabilities, n=80. Students without disabilities, n=178. Kruskal-Wallis H test (α=0.05): χ2(1)=0.40, p=0.53.

For those who had accessed support, prior to or since the pandemic, when asked how they learned about their institutions' academic support services, 40% of student survey respondents with disabilities and 66% of student respondents without pointed to their school's website (Figure 3). Instructors or teaching assistants was the next most commonly selected response for both groups, followed by counsellors for students with disabilities (35%) and friends and classmates for those without (38%).

Figure 3: "How did you learn about your school's academic support services?": Student Survey Respondents by Self-reported Disability

How did you learn about your school's academic support services? Check all that apply.

Students with disabilities who have accessed academic support services

Category	Percentage
Instructor or TA	38%
Friend or classmate	26%
Program coordinator	28%
Counselor	35%
School website	40%
Email ad	23%
Print ad	20%
Online search	16%
Other	8%
Prefer not to say	3%

Students without disabilities who have accessed academic support services

Category	Percentage
Instructor or TA	48%
Friend or classmate	38%
Program coordinator	30%
Counselor	21%
School website	66%
Email ad	36%
Print ad	19%
Online search	32%
Other	4%
Prefer not to say	1%
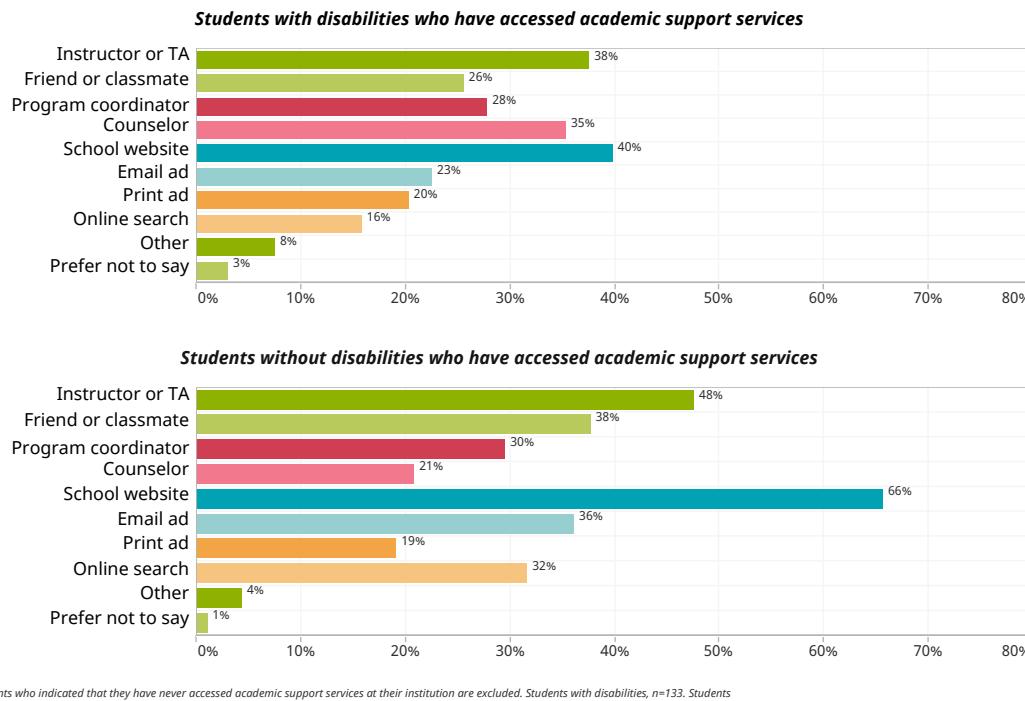
Students who indicated that they have never accessed academic support services at their institution are excluded. Students with disabilities, n=133. Students without disabilities, n=183.

Variability or variety in the tools and platforms used for courses may have added to the uncertainty experienced by many students, according to our interviews and staff survey. A variety of different platforms are being used across institutions, and within them among different departments and faculties. This can be especially challenging for students with disabilities who may require extra time to navigate each of these platforms.

A staff member we interviewed at an Ontario university empathized with students, saying, "They just wish there [was] more consistency. Why Zoom for math, then Blackboard Collaborate for another course, and a pre-recorded thing on YouTube for another? There's a learning curve with the course as well as with the technology. Students need to know what platform is being used, how to connect with it, in advance — not while simultaneously learning the course."

Difficulty Focusing, Staying on Top of Readings and Assignments and Understanding Course Material

Survey and interview results suggest that students had more difficulty focusing and managing their time when learning online as opposed to in person, and that this difficulty has been amplified during the COVID-19 pandemic. This could be due to the sudden shift to remote delivery, effects of the pandemic on health and relationships, or a combination of other factors.

Most students surveyed — 73% of students with disabilities and 67% of those without — disagreed or strongly disagreed with the statement that they found it easy to focus once courses moved online in March 2020. A majority of students agreed with the same statement in regard to their previous in-person and online courses (Figure 4).

Challenges with focus can also affect comprehension and retention of information. One third (33%) of survey respondents with disabilities disagreed or strongly disagreed with the statement that they understood the content covered by their instructors once the winter 2020 semester moved online. Just 1% of student respondents with disabilities felt this way about previous in-person courses, and about 11% felt similarly about previous online courses.

Figure 4: "I found it easy to stay focused…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student survey Respondents by Self-reported Disability and Level of Agreement

I found it easy to stay focused…
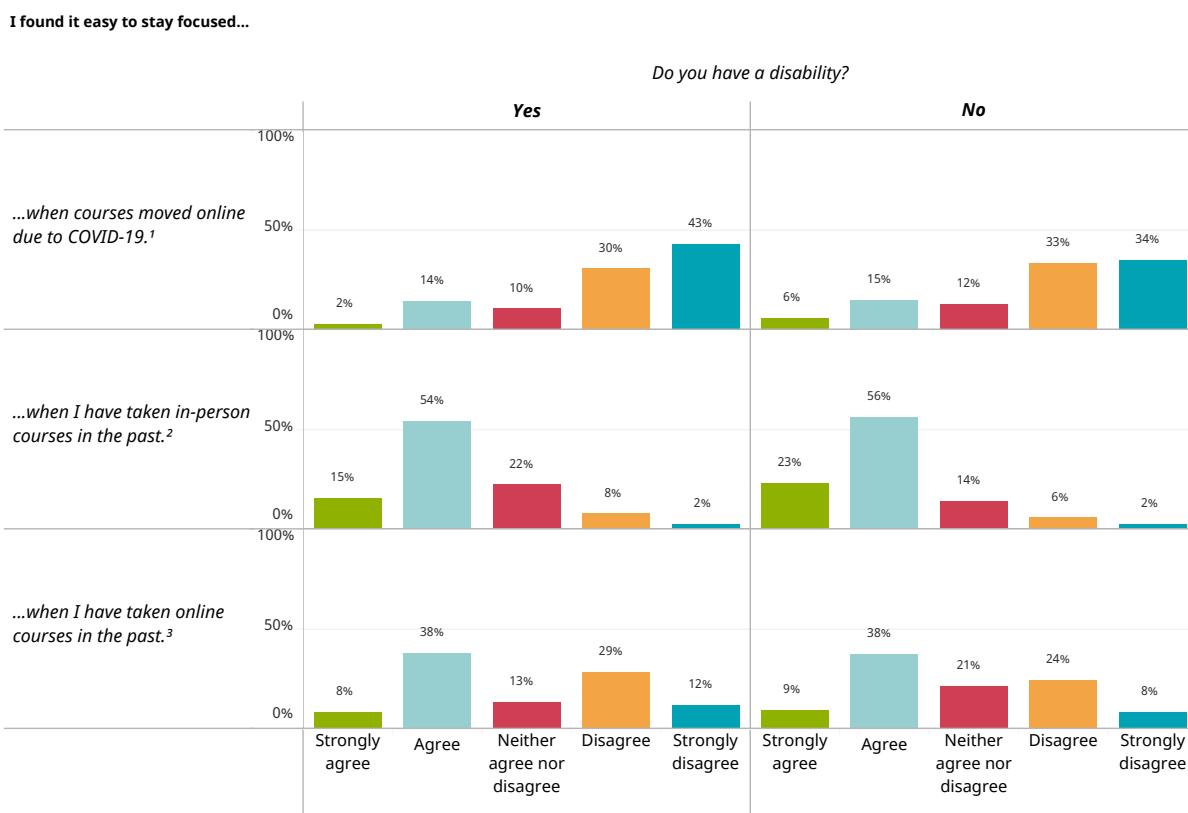
*Students who selected "Not applicable" in response to a given question are excluded from that distribution.*

¹ *Students with disabilities, n=207. Students without disabilities, n=410. Kruskal-Wallis H test (α=0.05): χ2(1)=4.92, p=0.03.*
² *Students with disabilities, n=207. Students without disabilities, n=397. Kruskal-Wallis H test (α=0.05): χ2(1)=9.09, p=0.00.*
³ *Students with disabilities, n=84. Students without disabilities, n=189. Kruskal-Wallis H test (α=0.05): χ2(1)=0.55, p=0.46.*

Learning environment is another factor affecting focus. Students — especially students who have issues with attention or who experience anxiety — often need a quiet space to study and complete assessments which they may not have at home. Then there are the distractions presented by distance learning tools themselves: our interviewees cited the chat function of platforms like Zoom as a particular challenge. If used while the instructor is speaking, the chat can divert

student attention from what the instructor is saying. For students using screen readers, questions and comments posted in the chat are read aloud, which is especially distracting.

As displayed in Figure 5, 65% of student respondents with disabilities and 47% of those without disagreed or strongly disagreed with the statement that it was easy to stay on top of readings and assignments once courses moved online due to COVID-19. This contrasts sharply with their reported experiences with prior in-person or online courses.

Figure 5: "I found it easy to stay on top of my readings and assignments" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

I found it easy to stay on top of my readings and assignments...
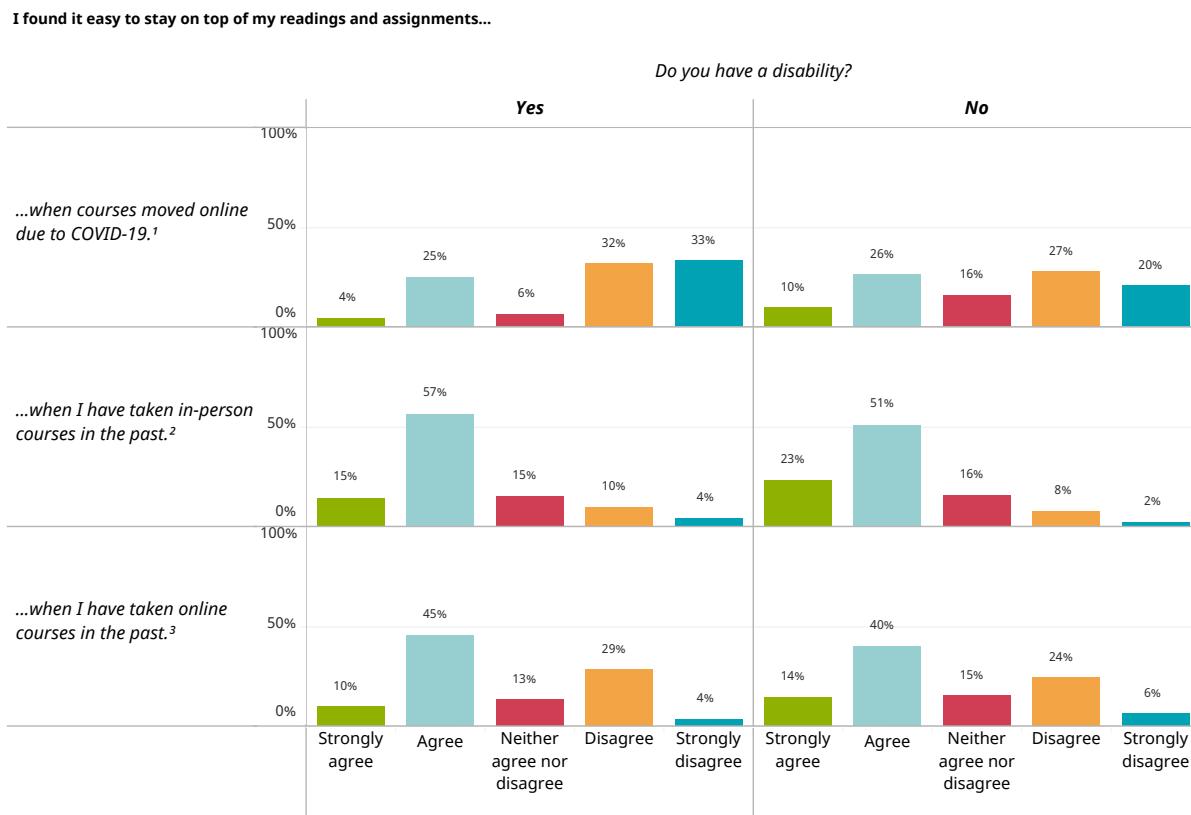
Students who selected "Not applicable" in response to a given question are excluded from that distribution.

[1] *Students with disabilities, n=205. Students without disabilities, n=410. Kruskal-Wallis H test (α=0.05): χ2(1)=15.20, p=0.00.*

[2] *Students with disabilities, n=206. Students without disabilities, n=396. Kruskal-Wallis H test (α=0.05): χ2(1)=4.58, p=0.03.*

[3] *Students with disabilities, n=84. Students without disabilities, n=189. Kruskal-Wallis H test (α=0.05): χ2(1)=0.11, p=0.74.*

Issues with focus and staying on top of course work are closely related to transferable skills like time management and organization. In response to our survey, one university staff member said that "many online tasks require greater executive skills that are unrelated to course content, and that could pose an increased challenge for students whose disabilities impact executive functioning (e.g., attention deficits, mental health disabilities, chronic pain, acquired brain injuries)."

Of the students who responded to our survey, 43% with disabilities and 46% without said that opportunities to build and improve skills like time management and productivity would be very or extremely important to their success in the fall 2020 semester (Figure 6). The instructors and staff we engaged added digital literacy, self-efficacy and organization to the list of skills that will be essential this academic year — and in a digitally driven world after graduation.

Figure 6: Importance of Opportunities to Build Transferable Skills to Expected Success in the Fall 2020 Semester: Student Survey Respondents by Self-reported Disability and Level of Importance

If your Fall 2020 semester occurs online, how important do you expect the following factor will be to your success?

Opportunities to build time management and other productivity skills.

Students who selected "Not applicable" in response to this question are excluded.
Students with disabilities, n=202. Students without disabilities, n=404. Kruskal-Wallis H test (α=0.05): χ2(1)=1.04, p=0.31.

Inadequate Access to Accommodations and Accessible Material

Both our surveys and interviews found both difficulty securing accommodations and difficulty obtaining material in alternate formats (i.e., with closed captioning, lecture recordings and transcripts, accessible texts) to be commonly reported challenges.

As illustrated by Figure 7, 37% of student survey respondents with disabilities disagreed or strongly disagreed with the statement that they could get materials in alternate formats or arrange alternate communication options once the winter 2020 semester moved to remote delivery. Additionally, 18% of student survey respondents with disabilities disagreed or strongly disagreed with the statement that if they needed an academic accommodation, their instructor accommodated them when courses moved online due to COVID-19. By comparison, 7% disagreed with this statement for previous in-person courses, and 10% disagreed about previous online courses.

Figure 7: "If I needed alternate format materials and/or communication options, I could easily obtain them…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

If I needed alternate format materials and/or communication options, I could easily obtain them…
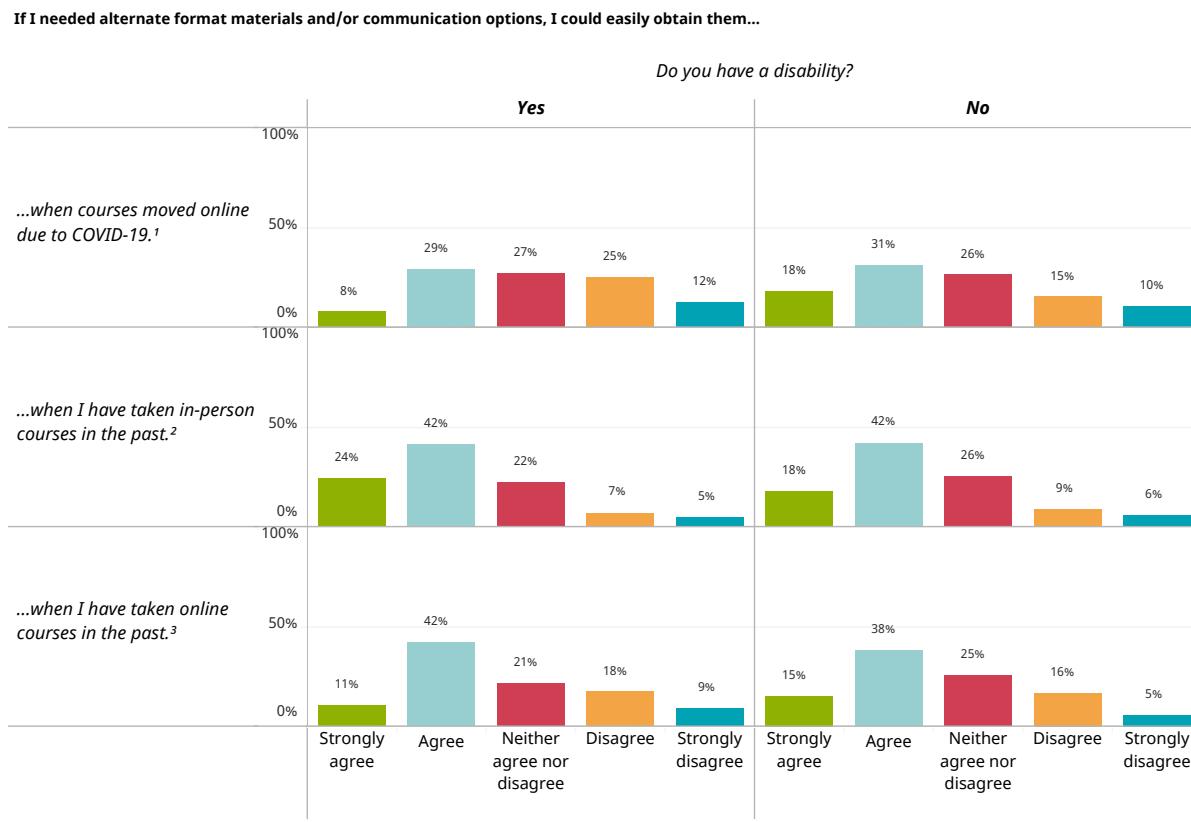
Students who selected "Not applicable" in response to a given question are excluded from that distribution.

¹ Students with disabilities, n=146. Students without disabilities, n=259. Kruskal-Wallis H test (α=0.05): χ2(1)=8.88, p=0.00.

² Students with disabilities, n=156. Students without disabilities, n=250. Kruskal-Wallis H test (α=0.05): χ2(1)=2.42, p=0.12.

³ Students with disabilities, n=57. Students without disabilities, n=111. Kruskal-Wallis H test (α=0.05): χ2(1)=0.38, p=0.54.

Several staff interviews highlighted how challenging it can be to arrange accommodations in a remote learning environment, especially if students had not previously registered or communicated with disability offices at their institutions — which could help explain the difficulties reported by all students seeking accommodations.

In addition to thinking about the needs of students with diagnosed disabilities and pre-existing accessibility needs, our interviewees encouraged staff and instructors to think about how the pandemic is affecting all students. Living situations, deficient technology, stress and a range of other factors may be affecting students' need for accommodations. As a staff member at an Ontario college put it, "The need may not be disability related … accommodation may look like being able to submit something different in a different way because a student doesn't have access to technology."

This idea is reinforced by our student survey results: 87% of students with disabilities and 88% of students without reported that having flexible course delivery and participation options would be extremely or very important for their success in fall 2020 (Figure 8). And a majority of students both with disabilities (75%) and without (73%) reported that

easy access to alternate format materials would be extremely or very important to their success if the fall 2020 semester occurs online.

Figure 8: Importance of Flexible Course Delivery/Participation to Expected Success in the Fall 2020 Semester: Student Survey Respondents by Self-reported Disability and Level of Importance

If your Fall 2020 semester occurs online, how important do you expect the following factor will be to your success?

Flexible course delivery/participation.
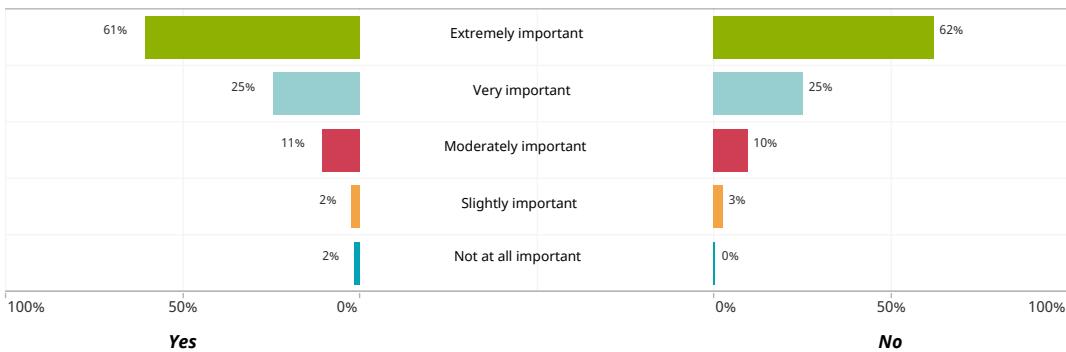
|	Yes		No
Extremely important	61%		62%
Very important	25%		25%
Moderately important	11%		10%
Slightly important	2%		3%
Not at all important	2%		0%

Students who selected "Not applicable" in response to this question are excluded.
Students with disabilities, n=204. Students without disabilities, n=405. Kruskal-Wallis H test (α=0.05): χ2(1)=0.37, p=0.54.

Difficulty Communicating and Building/Sustaining Relationships

In the words of one respondent to our staff survey, "Our students are lonely. They are having a hard time finding support with their virtual classmates."

The shift to online learning during COVID-19 has affected students' abilities to communicate with one another, whether for coursework, peer support or social purposes. In our student survey, 24% of students with disabilities and 31% of those without agreed or strongly agreed with the statement that it was easy to communicate with other students once the winter 2020 semester moved online. By contrast, 79% of students with disabilities and 85% of those without agreed or strongly agreed with that statement for their previous in-person courses, and 44% of students with disabilities and 33% of those without agreed or strongly agreed with regard to their previous online courses

Several staff interviewees also described challenges connecting with students remotely for counselling or advising. For some students living in family homes during the pandemic, the loss of privacy can make it difficult to have sensitive conversations with institutional staff, as well as with instructors and peers.

Inequitable Access to, and Problematic Assumptions About, Technology and Internet

The pandemic has brought numerous equity issues to light, and technology is a prime example. Previously, inequalities in students' home environments could be bridged to some extent on campus through facilities with assistive technology like libraries and computer labs. With campus closures, interviewees expressed concern about student access to technology, equipment and a steady internet connection all of which are needed to succeed in remote courses.

About 16% of students with disabilities and less than 10% of those without disabilities, reported experiencing issues with technology and/or internet access once the winter 2020 semester moved online. Meanwhile, 60% of students with disabilities and 60% of those without reported that access to IT support would be extremely or very important to their success if the fall 2020 semester occurs online.

Interviewees also touched on some problematic technology-related assumptions. A representative from the Canadian National Institute for the Blind reminded us, that "not every person with a disability loves technology. The notion of saying, you're blind, digital technology should be great for you is a stereotype."

In fact, several students with disabilities emphasized how challenging it can be navigating online tools. Interviewees with low vision mentioned the small buttons on platforms like Zoom, noting they are often the same colour (just a different shade) as the background, which can make them near impossible to see. And of course, Zoom fatigue is so common that it is now part of our pandemic vernacular. The strain of constant video viewing or conferencing is especially challenging for those with pre-existing conditions like multiple concussions or brain injuries, who should be limiting screen time.

Inaccessible Assessments

The topic of assessment — and in particular, concern about the rigidity of assessments — came up often in both our interviews (with instructors, staff and students) and our staff survey. Some courses offered during the winter 2020 semester involved short quizzes during class time or participation grades for showing up (virtually) to class, both of which fail to accommodate for the difficult life circumstances (e.g., different time zones, work/family obligations) many students are experiencing during the pandemic.

Speaking about exams, student and staff interviewees were concerned, both about technology tools and a loss of some privileges that they associated with previous in-person exams. Remote assessment tools can present specific accessibility concerns for students with disabilities. Online exams often require students to use a browser that locks down the testing environment within a learning management system (i.e., a Lockdown Browser), sometimes with the addition of using a webcam to prevent cheating. This kind of rigid "surveillance" can be extremely anxiety inducing for students, particularly students with disabilities, whose symptoms may be exacerbated by these arrangements. Proctoring technology, meanwhile, is not always compatible with assistive technology.

Some student interviewees regretted the loss of certain aspects of in-person exams, such as being able to use scrap paper, go back to previous questions, or ask an instructor for clarification. Others expressed frustration over not being permitted to walk away from their screen to take washroom or other breaks — this becomes especially problematic for students with inflammatory diseases who require frequent breaks.

Advantages Presented by Remote Delivery During the Pandemic

Despite the challenges surrounding the shift to remote delivery during the winter 2020 semester, there were also some bright spots. Our interviews in particular highlighted some advantages that students encountered once courses moved online due to the COVID-19 pandemic — advantages that they are optimistic will continue into the fall 2020 semester and beyond.

Flexibility and Choice

Some instructors and staff are now offering more flexibility to students in terms of how they can access services, take in content and participate in and demonstrate learning.

Staff in accessibility and counselling services shared in interviews that they are optimistic about delivering previously in-person services by phone, video or even text chat. Perhaps as a result of this new flexibility, staff survey respondents indicated that they were reaching more students during the pandemic than they typically had in previous years.

Instructors have made improvements too. Many are now recording or allowing students to record their lectures — something the student representatives we interviewed had advocated for long before the pandemic. Having access to recordings can reduce the burden on students who would otherwise have had to negotiate accommodations like note-taking. Recordings provide students the option of pausing, slowing down or speeding up the lecture (which one interviewee with ADHD says helps them stay focused), or replaying content (which can be important for students who have challenges with recall or fatigue). Recorded video content also allows students to adjust volume settings or run the recording (video or audio) through assistive software. Finally, having recordings available benefits all students who, for a variety of reasons, might be unable to attend a live lecture.

Some instructors have also changed their approach to grading participation, moving away from awarding credit for showing up (virtually) at a specified time. Some student interviewees who experience mobility issues and/or are immunocompromised said that prior to the pandemic they felt penalized by participation grades that were based on being physically present in class. "I had to drop a class because the elevator in the building was always broken. I was always half an hour late," said one former student and disability advocate who hopes this renewed thinking about participation grading persists post-pandemic.

Interviewees expressed appreciation that instructors also provided more flexible timelines for assignments, as well as multiple options to demonstrate learning. Students welcomed these changes too.

Fewer Physical, Sensory, and For Some, Social Barriers

For some students, online learning presents fewer barriers than being on campus. We interviewed students with mobility issues who would prefer not to navigate inaccessible buildings or public transit, as well as students who are immunocompromised and for whom staying home decreases risk of infection. We also spoke with students struggling

with social anxiety who have always dreaded walking into lecture halls filled with people, and students with other mental health-related issues who were often unable to attend in-person courses. And we heard that for some students whose homes are already set up to serve their accessibility needs, or who require regular access to specific nutrition and washroom facilities: online learning is their preference.

Some students shared that they are better able to manage their disability symptoms when they have the flexibility to pause and resume courses. And, when instructors work with accessibility specialist staff to embrace Universal Design for Learning (UDL)[2] principles, they can enable features like closed captioning or narration to optimize accessibility.

Prior to the pandemic, students who may have preferred online courses had fewer options to select from. Some of the interviewees we spoke with hope that, post-pandemic, students who prefer online learning will continue to have a range of options to choose from in their programs.

Anonymity and Reduced Stigma Navigating Accommodations and Services

Remote learning has offered a welcome option of anonymity for some students as it allows them to choose to disclose their disability to their peers and instructors, and to do so on their terms. For students who felt that in-person learning or assessments drew attention to their disability, there may be relief in not feeling singled out from and by their peers.

A university student shared with us that, "one downside for students who were registered with accessibility services pre-pandemic was confidentiality. They might be seen walking toward a particular service or leaving." For some students with this consideration, remote learning might relieve anxiety related to seeking support.

Several institutions have developed and implemented new online booking systems for counselling and advising services during the pandemic. Interviewees highlighted how this move can help ease the anxiety students seeking services may experience about making the first step and reaching out for support.

Innovative, Inclusive Pedagogy

Several interviewees and staff survey respondents were excited by early signs that the shift to online learning during the pandemic might be encouraging instructors to consider embracing more UDL principles in their courses and assessments. Online teaching, which is new for many instructors, is providing an opportunity to reconsider pedagogy, material and tools, in order to ensure that content is engaging and materials are accessible. Many instructors are now experimenting with new collaboration tools and creative assessment options. They are also drawing on technology advancements to make some accommodations moot, for instance, adding closed captioning or narration to reduce the need for note-takers.

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2 UDL encourages variety in teaching and assessment practices. The goal is to create flexibility, and in so doing, provide more equitable opportunities for students to succeed. According to the Center for Applied Special Technology, or CAST, the group that coined the term, "Universal design for learning (UDL) is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn." Read more: http://www.cast.org/our-work/about-udl.html.

It is an exciting time for the experts in teaching and learning who have long advocated for UDL: When we design for students with accessibility needs, more people benefit than just those in need.

Students are excited by the potential of UDL as well. As a student representative put it, "When we get through this, hopefully we can bolster the quality of online education so it's available to more students in the future."

Advice to Instructors and Staff

Reflecting on the results of our surveys as well as our interviews with student representatives, instructors, staff, and community advocates and administrators, we offer the following advice to instructors and staff.

We hope the ten recommendations laid out below are embraced during the pandemic and recovery. That said, the first three recommendations in particular, while brought to light by the pandemic and this research, are applicable to all postsecondary learning scenarios, now and in the future. Most recommendations, while particularly relevant to a remote learning context, will also be relevant when in-person courses resume.

Figure 9: Advice to Instructors and Staff for Improving Accessibility During the COVID-19 Pandemic and Recovery

ADVICE TO INSTRUCTORS AND STAFF
for improving accessibility during the COVID-19 pandemic and recovery.

- Incorporate Universal Design for Learning principles into your courses and encourage colleagues to do the same.
- Empower students to make choices that suit their needs.
- Enable transferable skill development.
- Create certainty where you can.
- Share information about how to access services and accommodations remotely.
- Find ways to facilitate engagement and meaningful interaction.
- Check in with students.
- For synchronous courses - consider recording and be mindful that chat tools can be distracting.
- When in-person courses resume, protect immunocompromised students.
- Practice empathy.

Incorporate Universal Design for Learning Principles in All Courses. Lean on Your Colleagues to Do So.

UDL encourages variety in teaching and assessment practices. The goal is to create flexibility and provide more equitable opportunities for students to succeed.

Time and again, our interviewees stressed the need for collaboration between instructors and staff in embracing UDL principles and creating accessible learning environments. With their advice in mind, we encourage instructors at Ontario postsecondary institutions to draw upon the expertise of local teaching and learning centres (e.g., Teaching & Learning Consultants, Curriculum Development Specialists, Educational Technology Specialists, Instructional Designers) as well as the Accessibility for Ontarians with Disabilities Act (AODA) offices and offices for students with disabilities. These specialists are often experts in UDL principles and can help in the design and delivery of courses, which can help relieve the burden for students (and faculty) who might have otherwise needed to seek out accommodations.

"It's critical to think of designing for students with accessibility needs in advance. After the fact can be difficult and you might make some choices that aren't supportable," advised a staff member at Athabasca University.
That being said, staff like assistive technologists can often help with specific questions or issues instructors encounter throughout the semester. For instance, will a specific PowerPoint presentation or visual work well with screen readers? What platforms or tools offer synchronous closed captioning?

Students will appreciate these efforts, as our student survey results demonstrate. Recall (Figure 8) that most respondents, with and without disabilities, indicated flexible course delivery and participation would be important for their success.

An instructor at an Ontario university said it best: "I don't begrudge instructors who are busy, but if you can take that extra time, you will see more students excel." This advice is not only relevant in the (virtual) classroom; staff should ensure that any events or services offered by their institution are designed with accessibility in mind.

One interviewee also encouraged instructors to inform students when UDL principles are being embraced in their courses. For example, instructors should indicate the expected writing time for assessments like take-home exams, noting if any extra time has been built in to accommodate accessibility needs or other personal circumstances.

Empower Students to Make Choices that Suit Their Needs

While UDL can certainly help optimize learning for most students, it is unfortunately not always possible to design and deliver courses in a way that suits the needs of all learners at once. However, by being transparent and forthright about both course format and what is required to participate and succeed, instructors can empower students to make course selections that suit individual learning goals and needs (provided disability-related accommodations are available).

The student representatives we interviewed identified a variety of personal preferences and needs. For example, a student who is Deaf, deaf or hard of hearing[3] may prefer to watch asynchronous lectures with closed captioning rather than synchronous lectures taught over Zoom. A student with a cognitive disability who appreciates the ability to pause, slow down and/or rewind content might have a similar preference, especially if access to accommodations like note-taking remain hindered by the pandemic. Another student with the same disability might like having a set schedule of live lectures and discussion groups to help with motivation. "Each person is unique and that needs to be taken into account. People with the same disability may deal with their particular disability in their own way," said a representative from the Council of Canadians with Disabilities.

The good news is we can empower students to choose options that work for them. If there are a variety of course formats to choose from, and the details of course delivery are communicated clearly in the course catalogue ahead of the semester, students can select the courses that best suit their needs. For the same reason, instructors should strive to share information about course requirements and participation expectations as soon as possible. This way students can obtain resources in an accessible format (e.g., texts with enlarged print) and/or arrange for accommodations if required. Sharing information about expectations early on can also help alleviate student anxiety about what to expect, which supports well-being and retention.

Enable Transferable Skill Development

All students, not just those with disabilities or accessibility needs, will require specific transferable skills to be successful with remote and online learning. Recall that many students who responded to our survey said that opportunities to build and improve skills like time management and productivity would be very or extremely important to their success in the fall 2020 semester (Figure 6). The instructors and staff we engaged added digital literacy, self-efficacy and organization to the list of skills that will be essential this academic year — and in a digitally driven world after graduation.

As our interviewees noted, instructors can facilitate the development of these skills at the course level in a few ways. For instance, instructors can provide suggested timelines for completing assignments, especially in asynchronous courses, and models or templates for what "successful" time management in the context of their course may look like. An instructor at an Ontario university provided another good example: "When my students submit an essay, they have to submit a work breakdown structure — that helps people who don't even know where to get started."

Instructors should also consider sharing learning strategies with their students in class and referring students who need additional support to the learning and academic strategists at their institutions. Staff should consider offering co-

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3 **Deaf (with capital D)** refers to individuals who are medically deaf or hard of hearing who identify with and participate in the culture, society, and language of Deaf people, which is based on Sign language. Their preferred mode of communication is Sign.

deaf: refers to individuals who have little or no functional hearing but who do not necessarily identify with the Deaf community.

hard of hearing: refers to individuals whose hearing loss ranges from mild to profound and whose usual means of communication is speech.

These definitions are from the Canadian Association of the Deaf. Read more at http://cad.ca/issues-positions/terminology/.

curricular activities like workshops, online videos or tip sheets that nudge students to adjust and apply some of their learning strategies in an online context.

Create Certainty Where You Can

In times of uncertainty, students may have less bandwidth — less energy and attention — to devote to learning (Verschelden, 2020). Knowing this, it is perhaps not surprising that many students we engaged reported difficulty focusing (Figure 4), staying on top of readings and assignments (Figure 5) and issues understanding course content when remote delivery began during the winter 2020 semester. Instructors and staff at Ontario institutions can help by offering certainty, where possible, about what to expect and what is expected of students. Here are some more specific examples:

- o Establish expectations and/or etiquette for participation either at the course or program level.
- o Do not assume students know how to use all technology. Provide resources about how to use any tools required for course participation, and remember, students may be using multiple tools each day — try to streamline where possible and allow students to test out assessment platforms in advance (e.g., via a short practice exam) to avoid technical issues during assessments.
- o Provide a schedule or road map upfront. Recall from our student survey, 97% of students with disabilities and 95% of those without reported that clear communication about course expectations, schedules and deadlines would be extremely or very important to their success if the fall 2020 semester occurs online.

Again, sharing this sort of information can also help alleviate student anxiety, which can lead to improved outcomes including retention.

Share Information About How to Access Services and Accommodations Remotely

As illustrated in Figure 2, just 25% of student survey respondents with disabilities indicated that they knew where to access counselling or advising during the pandemic.

Some of the representatives we interviewed said that information about support services is typically shared and received most effectively during student orientation. Knowing orientation will look quite different this year — and possibly next year as well — institutions, staff and instructors will need to explore other options to communicate services to students.

Seeing that instructors are a primary source of information (Figure 3), institutions should ensure that instructors know where to direct students seeking support services and accommodations. And instructors should consider adding a statement of accommodation to their syllabuses, referring students to the disability office.

There should also be at least one easy-to-find place, likely on the institutional website (the primary source of information according to our survey, see Figure 3), that includes up-to-date, comprehensive information. Instructors and staff can direct students here from multiple other communication tools, including social media, email, course syllabuses

and the learning management system. This resource should include information about community supports (off-campus) if institutional offerings have been disrupted.

If using print or electronic posters to share information about accessibility services and supports, institutions should ensure that these methods are themselves accessible. That is, they should be easy to comprehend and compatible with assistive technology like screen readers.

Lastly, institutions should reach out to students, so they know that it is okay to ask for help. Students appreciate when instructors "check in" and keep them informed as policies and procedures continue to shift. Worry less about pestering students and worry more about keeping them informed. As a student representative told us, "People are often worried about repeating information, but in this context, I think it's better to share it over multiple platforms."

Find Ways to Facilitate Engagement and Meaningful Interaction

Institutions will need to find innovative ways of facilitating engagement among students, instructors and staff while social distancing measures are in place.

Of the more than 600 students who participated in our survey, 56% with disabilities and 59% without reported that having multiple options for communicating with other students would be extremely or very important to their success if the fall 2020 semester occurs online. This was echoed repeatedly in our interviews as well. Knowing this, we encourage instructors to experiment with different approaches, such as:

- o   Using the breakout groups feature on platforms like Zoom
- o   Experimenting with collaboration tools (some interviewees reported success in using Blackboard for group brainstorming, or enabling peer-to-peer interaction through other learning management systems)
- o   Having students lead conversations and propose discussion questions

These are just a few ideas, and teaching and learning centres likely have many more. It is also important to create opportunities for interaction between students and instructors. Again, our student survey revealed that a majority of students with and without disabilities (77% and 76% respectively) felt that having multiple options for communicating with their instructors would be extremely or very important to their success in the fall 2020 semester.

Engagement between students and staff is also essential, especially for students accessing support or services. As described in the opportunities section above, accessibility services at some institutions have had success reaching a greater number of students by offering a range of communication options, including phone, video conferencing or text chat.

Lastly, it is important that instructors and staff (e.g., teaching and learning consultants, curriculum development specialists, educational technology specialists, disability support staff) interact with each other, within and across institutions and institutional departments. In addition to sharing knowledge and ideas, we encourage the sharing of resources (e.g., exploring use of Creative Commons licenses and Open Educational Resources) to, as multiple

interviewees put it, "avoid recreating the wheel." We have seen some good examples of this on Twitter, and we encourage institutional administrators to find ways of facilitating this kind of interaction virtually.

Check in with Students

As one university staff member interviewed put it, "students need to know, disabled or not, that people care about them. Instructors and staff care about their learning, and recognize that we're in a period of time that nobody was prepared for."

To assess how well various approaches or tools are working, consider polling students. A number of the instructors and staff we spoke with had recent success "checking in" by polling students to improve their practices. Some instructors recommended using a student survey or using other means of inviting feedback at the beginning of the semester and again midway through to find out what is working well and what is not. Without changing the format too drastically (as we said above, students may have selected your course because of its structure), checking in can lead to small adjustments that improve engagement and outcomes.

Staff at accessibility offices should also consider regularly inviting feedback to understand the ways in which students prefer receiving support. We also heard in our interviews with students that they really appreciate when staff proactively check in on them after they have come forward with accessibility needs.

For Synchronous Courses — Consider Recording and Be Mindful that Chat Tools Can Be Distracting

Several interviewees explained that note-takers are hard to access right now. Recorded lectures can help alleviate the loss of this specific accommodation. The option to pause, slow down, speed up or replay content, video or audio recordings can benefit many students with accessibility needs.

As we discussed in the section *Challenges Presented by Remote Learning During the Pandemic*, the chat function on platforms like Zoom, while useful for engagement, can be distracting for some students if it is enabled during a lecture or presentation. This particular issue was raised by numerous student interviewees and in our staff survey. For students with screen readers, comments and questions posed in the chat are read aloud, drowning out the voice of the instructor or presenter. And for students with difficulty focusing, chat notifications can be disruptive. If the platform allows, instructors should consider only enabling the chat after a presentation or lecture, or at a natural break, and making the transcript available after class in case students want to review questions or comments put forward by their peers.

When In-person Courses Resume, Protect Immunocompromised Students

When the time comes to return to physical campuses, it is essential that instructors, staff and students remember that some people will find this particularly challenging. Interviewees emphasized the need to be mindful that for those students, instructors and staff who are immunocompromised, good health hygiene will continue to be essential. Institutions should do their best to keep work spaces clean, continue encouraging regular hand washing, and be

adamant that students, instructors and staff should stay home if they have any cold or flu-like symptoms. To reinforce this point, instructors should avoid tying participation grades to physical attendance in class.

Practice Empathy

Above all, it is important that we remind ourselves to be empathetic. Interviewees noted that instructors and staff should remember that students are grieving — for the school year they had envisioned, the connections with friends or family they have not had over the summer, and quite possibly the loss of a loved one due to the pandemic. We should also be mindful that many students are juggling their responsibilities as learners with caregiving and work obligations. Despite childcare centres and schools reopening, some students may still find themselves minding young children and homeschooling. Students who were unable to find full-time employment over the summer may have to work part time through the academic year to make up for lost income.

Many students with disabilities will face additional health-related challenges. Those who rely on regular medical, therapeutic or attendant care may be experiencing disruptions to the services they need.

Where possible, we encourage staff to explore whether there are changes to institutional polices or practices that could be made to express more empathy this academic year. For example, waiving fees or extending the deadline for late course withdrawals, as it may take students more time than usual to figure out what course formats work for them. Another option worth exploring is revising eligibility criteria for financial supports like bursaries to include part-time students, as many students — particularly those with disabilities — may need to reduce their course load in the current context.

For instructors, embracing UDL principles will help demonstrate empathy. For example, extending deadlines for all students (and not just those who come forward with an accessibility need), and allowing students to select between a set of assignments or assessments to demonstrate learning in a way that works for them, can ease some of the stresses students may be facing.

Conclusion

While the COVID-19 pandemic has presented enormous challenges, it has also provided an opportunity and impetus to consider how our systems and institutions are advantaging certain groups over others.
We put forward three scenarios to the students we surveyed: when remote delivery started due to the pandemic, in previous online courses, and in previous in-person courses. On average, more students with disabilities reported experiencing challenges than students without disabilities in all three scenarios. For students with disabilities, many of the challenges associated with their learning are not newly presented by the pandemic, they are amplified by it.

Reflecting on the experiences and advice of the students, instructors, staff and community advocates we engaged for this research, we offer the ten recommendations above for supporting accessibility in the 2020/21 academic year. We hope these recommendations are useful to instructors, staff and the students they serve. More than that though, we hope these recommendations become a starting point for a much-needed ongoing dialogue about how to improve experiences and outcomes for students with disabilities at Ontario's colleges and universities over the long term.

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Improving the Accessibility of Remote Higher Education: Lessons from the Pandemic and Recommendations Appendix

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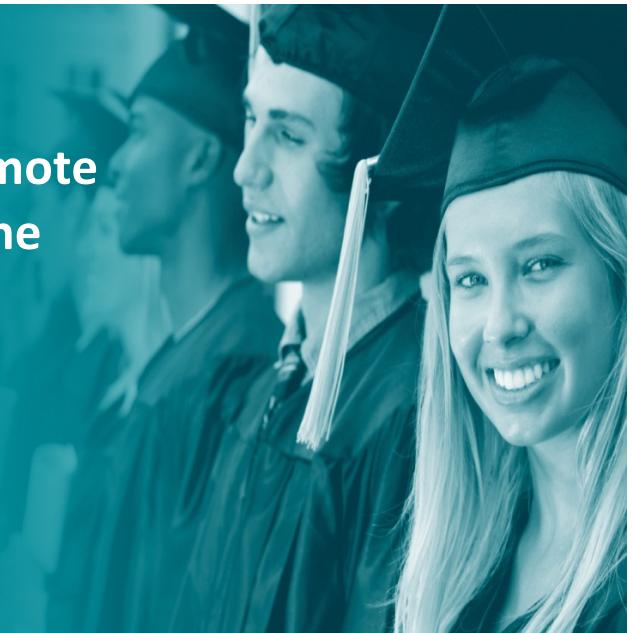
Appendix 1: Methodology

Our data collection efforts consisted of three major strategies: a survey of postsecondary students; interviews with postsecondary students, instructors and staff; and a survey of accessibility office staff.

Student Survey

The 15-minute online student survey was administered by Academica Group in May and June of 2020. The sample was drawn from Academica's Student Vu panel. Respondents had to have completed the winter 2020 semester at an Ontario college or university. Graduate students were excluded from participating. Students with self-reported disabilities were oversampled but apart from that, few sampling controls were used. Survey responses were anonymized by Academica before being shared with HEQCO.

The survey asked students how their recent remote learning experiences compared, positively or negatively, to their pre-pandemic in-person and online learning experiences. This approach highlighted some of the challenges and opportunities for student success presented by the pandemic. A copy of the questionnaire can be found in *Appendix 2: Data Tables for Chart Figures*.

It is important to note that first, participation in the survey was voluntary and second, our survey sample was not representative. Due to the likelihood of sample bias, we refrain from generalizing about the results.

Analysis

The data was cleaned and analyzed using Stata 16. Our analysis consisted mainly of descriptive statistics. Due to the likelihood of sample bias, significance testing was limited to non-parametric methods (specifically, the Kruskal-Wallis H test and the Wilcoxon signed-rank test). These tests were used only to compare distributions in cases where the test assumptions were satisfied.

Respondents who selected 'Prefer not to answer' in response to Question 1 ('Do you have a disability?') were grouped with the respondents who selected 'No' in response to the same question. Respondents who selected 'Not applicable' for any of the Likert-scale questions were excluded from the distribution for that reference period.

Sample characteristics

623 respondents in total completed the student survey. All respondents were enrolled in and completed the winter 2020 semester at an Ontario college or university. One-third of respondents reported that they have a disability (n=208), and of those respondents, 77% reported having disclosed their disability to their postsecondary institution.

Table 1: Sample Characteristics (student survey)

Sample characteristics	Q1. Do you have a disability?		
	No/Prefer not to answer	*Yes*	*Total*
n	415	208	623
% Students with a disability	0%	100%	33%
% University students	67%	67%	67%
% College students	33%	33%	33%
% Students who have disclosed a disability to their institution	0%	77%	26%
% Students who have been granted an academic accommodation at some point	0%	77%	26%
% Female students	53%	63%	57%
% International students	7%	1%	5%
% Students pursuing bachelor's degrees	66%	67%	66%
% Students enrolled part-time	5%	5%	5%
Median age	21	20	
% Students who had taken an online course prior to the COVID-19 pandemic	46%	43%	45%

28 respondents selected 'Prefer not to answer' in response to Q1. These respondents have been grouped with the respondents who selected 'No' in response to Q1 (n=387).

Qualitative Data Collection

Interviews

In-depth, semi-structured interviews were conducted with 32 key stakeholders. Interviewees included 11 postsecondary student representatives, four postsecondary instructors, 12 postsecondary staff members, and five community advocates across Canada.[4]

Participants were recruited through a snowball sampling approach. We interviewed participants until we reached data saturation, or in other words, reached the point where the data became redundant, and thus signalled we no longer needed to continue interviewing.

All interviews were conducted by two HEQCO staff members via Zoom or over the phone, and ranged between 40 and 60 minutes, depending on whether more than one individual was participating.
Our interview sample was not representative. Many of the participants we spoke to already had a keen and vested interested in the topic of accessibility services, and thus already had some "buy-in" with regards to the importance of designing courses and policies with accessibility in mind. Again, due to the likelihood of sample bias, we refrain from generalizing about the results.

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4 It should be noted that while affiliations were only counted once, many of the interviewees held multiple roles (i.e., instructor and staff member) and thus were able to share their experiences in more than just one way

Table 2: Summary of Interview Participants

Role	Participants
Student Representatives	11
Instructors	4
Staff	12
Community Advocates	5
Total	**32**

Table 3: Interview Participant Affiliations and Descriptions

Affiliation	Role
Canadian National Institute for the Blind (CNIB)	Representative
Community advocate	Consultant
Accessibility for Ontarians with Disabilities Act Alliance (AODA)	Representative
Contact North	Staff
Council of Canadians with Disabilities (CCD)	Representative
Thomson Rivers University	Instructor
University of Toronto Scarborough	Instructor
Western University	Instructor
York University	Instructor
Athabasca University	Staff
Carleton University	Staff members (2)
Centennial College	Staff
McMaster University	Staff
McMaster University	Staff
Mohawk College	Staff
Mohawk College	Staff
Ryerson University	Staff
University of Ottawa	Staff
University of Toronto	Staff members (2)
Cambrian College	Student representative
Canadian Federation of Students (CFS)	Student representatives (2)
Ontario College of Art & Design (OCAD U) University	Student representative
Ontario Institute for Studies in Education (OISE)	Student representative
Ontario Undergraduate Student Alliance (OUSA)	Student representatives (2)
University of Toronto	Student representatives (3)
Western University	Student representative

Staff Survey

Interview questions were also distributed to a listserv of all postsecondary Ontario disability support staff in the form of an online survey. The survey consisted of only open-ended questions and was administered using the Simple Survey platform. There were 72 respondents in total: 46 responded from Ontario colleges, and 26 from Ontario Universities.

Table 4: Ontario Disability Service Staff Survey Responses

Role	Respondents
College disability service staff	46
University disability service staff	26
Total	**72**

Table 5: College Disability Service Staff Affiliations

College	Count
Prefer not to say	4
Algonquin College	2
Canadore College	3
Centennial College	6
Conestoga College	1
Confederation College	6
Durham College	5
Fanshawe College	1
Fleming College	1
George Brown College	3
Georgian College	2
Humber College	3
Collège La Cité	1
Lambton College	1
Mohawk College	1
Sault College	1
Seneca College	2
Sheridan College	3
Total	**46**

Table 6: University Disability Service Staff Affiliations

University	Count
Prefer not to say	7
Carleton University	1
Laurentian University	1
McMaster University	1
Ontario Tech University	1
Ryerson University	1
Trent University	2
University of Ottawa	1
University of Toronto	5
Western University	2
Wilfrid Laurier University	3
York University	1
Total	**26**

Analysis

NVivo 11 software was used to code and compare findings. All interviews and data from the online survey were imputed and organized by "type" (i.e., staff, student, instructor, community member). The first stage of coding was a deductive approach. We considered larger themes that were important to this research overall (e.g., accommodations, UDL) as they appeared in our interview notes and debriefing sessions. In the second stage, data was analyzed inductively, as repeated themes and issues regarding accessibility services and supports emerged when reviewing interview transcripts.

Appendix 2: Data Tables for Chart Figures

Students who selected 'Not applicable' in response to a given question are excluded from that distribution. Due to rounding, totals might not add up to exactly 100%.

Data Tables, Figure 1: "I understood what I needed to do to participate in my courses…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

I understood what I needed to do to participate in my courses when courses moved online due to COVID-19.	Students with disabilities	Students without disabilities
Strongly agree	9%	19%
Agree	47%	44%
Neither agree nor disagree	17%	15%
Disagree	17%	17%
Strongly Disagree	10%	5%
Total	**100%**	**100%**
n	205	411

I understood what I needed to do to participate in my courses when courses moved online due to COVID-19.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	7.60
p	0.01

I understood what I needed to do to participate in my courses when I have taken in-person courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	35%	46%
Agree	57%	46%
Neither agree nor disagree	7%	7%
Disagree	1%	2%
Strongly Disagree	0%	0%
Total	**100%**	**101%**
n	207	397

I understood what I needed to do to participate in my courses when I have taken in-person courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	4.85
p	0.03

I understood what I needed to do to participate in my courses when I have taken online courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	18%	27%
Agree	63%	56%
Neither agree nor disagree	8%	9%

Disagree	11%	5%
Strongly Disagree	0%	2%
Total	**100%**	**99%**
n	84	188

I understood what I needed to do to participate in my courses when I have taken online courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	2.09
p	0.15

Data Tables, Figure 2: "I knew where to go for counselling or advising if I needed it…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

I knew where to go for counselling or advising if I needed it when courses moved online due to COVID-19.	Students with disabilities	Students without disabilities
Strongly agree	5%	10%
Agree	20%	33%
Neither agree nor disagree	18%	17%
Disagree	34%	26%
Strongly Disagree	23%	14%
Total	**100%**	**100%**
n	202	397

I knew where to go for counselling or advising if I needed it when courses moved online due to COVID-19.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	20.55
p	0.00

I knew where to go for counselling or advising if I needed it when I have taken in-person courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	21%	27%
Agree	52%	49%
Neither agree nor disagree	16%	14%
Disagree	9%	8%
Strongly Disagree	1%	2%
Total	**99%**	**100%**
n	205	385

I knew where to go for counselling or advising if I needed it when I have taken in-person courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	1.63

p	0.20

I knew where to go for counselling or advising if I needed it when I have taken online courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	10%	11%
Agree	49%	43%
Neither agree nor disagree	16%	19%
Disagree	21%	21%
Strongly Disagree	4%	6%
Total	**100%**	**100%**
n	80	178

I knew where to go for counselling or advising if I needed it when I have taken online courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	0.40
p	0.53

Data Tables, Figure 3: "How did you learn about your school's academic support services?": Student Survey Respondents by Self-reported Disability

How did you learn about your school's academic support services? Check all that apply.	Students with disabilities	Students without disabilities
Instructor or TA	38%	48%
Friend or classmate	26%	38%
Program coordinator	28%	30%
Counsellor	35%	21%
School website	40%	66%
Email ad	23%	36%
Print ad	20%	19%
Online search	16%	32%
Other	8%	4%
Prefer not to say	3%	1%
n	133	183

Data Tables, Figure 4: "I found it easy to stay focused…" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

I found it easy to stay focused when courses moved online due to COVID-19.	Students with disabilities	Students without disabilities
Strongly agree	2%	6%
Agree	14%	15%
Neither agree nor disagree	10%	12%
Disagree	30%	33%
Strongly Disagree	43%	34%

Total	99%	100%
n	207	410

I found it easy to stay focused when courses moved online due to COVID-19.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	4.92
p	0.03

I found it easy to stay focused when I have taken in-person courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	15%	23%
Agree	54%	56%
Neither agree nor disagree	22%	14%
Disagree	8%	6%
Strongly Disagree	2%	2%
Total	101%	101%
n	207	397

I found it easy to stay focused when I have taken in-person courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	4.92
p	0.03

I found it easy to stay focused when I have taken online courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	8%	9%
Agree	38%	38%
Neither agree nor disagree	13%	21%
Disagree	29%	24%
Strongly Disagree	12%	8%
Total	100%	100%
n	84	189

I found it easy to stay focused when I have taken online courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	0.55
p	0.46

Data Tables, Figure 5: "I found it easy to stay on top of my readings and assignments" Pre- vs. Post-shift to Remote Delivery due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

I found it easy to stay on top of my readings and assignments when courses moved online due to COVID-19.	Students with disabilities	Students without disabilities
Strongly agree	4%	10%
Agree	25%	26%
Neither agree nor disagree	6%	16%
Disagree	32%	27%
Strongly Disagree	33%	20%
Total	**100%**	**99%**
n	205	410

I found it easy to stay on top of my readings and assignments when courses moved online due to COVID-19.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	15.20
p	0.00

I found it easy to stay on top of my readings and assignments when I have taken in-person courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	15%	23%
Agree	57%	51%
Neither agree nor disagree	15%	16%
Disagree	10%	8%
Strongly Disagree	4%	2%
Total	**101%**	**100%**
n	206	396

I found it easy to stay on top of my readings and assignments when I have taken in-person courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	4.58
p	0.03

I found it easy to stay on top of my readings and assignments when I have taken online courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	10%	14%
Agree	45%	40%
Neither agree nor disagree	13%	15%
Disagree	29%	24%
Strongly Disagree	4%	6%
Total	**101%**	**99%**
n	84	189

when I have taken online courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	0.11

p	0.74

Data Tables, Figure 6: Importance of Opportunities to Build Transferable Skills to Expected Success in the Fall 2020 Semester: Student Survey Respondents by Self-reported Disability and Level of Importance

If your fall 2020 semester occurs online, how important do you expect opportunities to build time management and other productivity skills will be to your success?	Students with disabilities	Students without disabilities
Extremely important	22%	23%
Very important	21%	23%
Moderately important	23%	23%
Slightly important	25%	23%
Not at all important	9%	7%
Total	**100%**	**99%**
n	202	404

If your fall 2020 semester occurs online, how important do you expect opportunities to build time management and other productivity skills will be to your success?	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	1.04
p	0.31

Data Tables, Figure 7: "If I needed alternate format materials and/or communication options, I could easily obtain them…" Pre- vs. Post-shift Online due to COVID-19: Student Survey Respondents by Self-reported Disability and Level of Agreement

If I needed alternate format materials and/or communication options, I could easily obtain them when courses moved online due to COVID-19.	Students with disabilities	Students without disabilities
Strongly agree	8%	18%
Agree	29%	31%
Neither agree nor disagree	27%	26%
Disagree	25%	15%
Strongly Disagree	12%	10%
Total	**101%**	**100%**
n	146	259

If I needed alternate format materials and/or communication options, I could easily obtain them when courses moved online due to COVID-19.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	8.88
p	0.00

If I needed alternate format materials and/or communication options, I could easily obtain them when I have taken in-person courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	24%	18%
Agree	42%	42%
Neither agree nor disagree	22%	26%
Disagree	7%	9%
Strongly Disagree	5%	6%
Total	**100%**	**101%**
n	156	250

If I needed alternate format materials and/or communication options, I could easily obtain them when I have taken in-person courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	2.42
p	0.12

If I needed alternate format materials and/or communication options, I could easily obtain them when I have taken online courses in the past.	Students with disabilities	Students without disabilities
Strongly agree	11%	15%
Agree	42%	38%
Neither agree nor disagree	21%	25%
Disagree	18%	16%
Strongly Disagree	9%	5%
Total	**101%**	**99%**
n	57	111

If I needed alternate format materials and/or communication options, I could easily obtain them when I have taken online courses in the past.	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	0.38
p	0.54

Data Tables, Figure 8: Importance of Flexible Course Delivery/Participation to Expected Success in the Fall 2020 Semester: Student Survey Respondents by Self-reported Disability and Level of Importance

If your fall 2020 semester occurs online, how important do you expect flexible course delivery/participation will be to your success?	Students with disabilities	Students without disabilities
Extremely important	61%	62%
Very important	25%	25%
Moderately important	11%	10%
Slightly important	2%	3%

Not at all important	2%	0%
Total	**101%**	**100%**
n	204	405

If your fall 2020 semester occurs online, how important do you expect flexible course delivery/participation will be to your success?	Kruskal-Wallis H test
alpha	0.05
degrees of freedom	1
chi-squared	0.37
p	0.54

Appendix 3: Student Survey Instrument

The sudden disruption caused by the COVID-19 pandemic has pushed colleges and universities to move courses and content online in a hurry. As institutions work to enable remote learning, all students will have to adapt, and some will find that process more challenging than others.

The purpose of this survey is to learn about the types of supports that students need to succeed in an online learning environment, and how those needs may be different from the supports students rely on when taking in-person classes. By participating in this survey, you will contribute to a larger project aimed at helping colleges and universities maintain accessibility and learning supports online during the pandemic and recovery.

This survey is being conducted by Academica Group on behalf of the Higher Education Quality Council of Ontario (HEQCO). HEQCO is an arms-length agency of the Government of Ontario, with a mandate to conduct research and provide evidence-based policy advice towards the continued improvement of postsecondary education in Ontario.

Item	Survey Question	Response Style
Gender	What is your gender? • Woman • Man • Other gender • Prefer not to answer	Select one
Age_Q2	What is your date of birth	Month/Day/Year
Q0_1	Were you enrolled at a college or university for the winter 2020 (January-April) semester?	Y/N
If "No", screen out.		
Q0_2	Did you complete the winter 2020 (January-April 2020) semester?	Y/N
If "No", screen out.		
Q0_3	What type of institution did you attend for the winter 2020 (January-April) semester? a. College located in Ontario b. College located outside of Ontario c. University in Ontario d. University located outside of Ontario	Select one
If college located in Ontario		
Q8_col	What type of credential will you receive upon graduating from your program? a. College certificate b. College diploma c. College degree d. Other, please specify:	Select one
If University in Ontario		
Q8_uni	What type of credential will you receive upon graduating from your program? a. Bachelor's degree b. Master's degree c. Doctorate (PhD) d. Other, please specify:	Select one
If "b" or "d" (institution located outside Ontario), screen out.		

Item	Survey Question	Response Style
Q1_0	Do you have a <u>disability</u>*? *Any disability (mobility, sensory, psychiatric, cognitive, learning disability) that has been formally diagnosed by a doctor or a psychologist.	Y/N/Prefer not to say
If "Yes", complete 1.1-1.2. If "No" or "Prefer not to say" proceed to 2.0.		
Q1_1	Have you disclosed your disability to the <u>accessibility office</u>* at your school? *The accessibility office is sometimes called the office for students with disabilities. This office usually helps students with disabilities to access and use assistive technology in their courses, provides alternate format course materials, and identifies academic accommodations and other strategies students with disabilities can use to succeed at college or university.	Y/N/Prefer not to say
Q1_2	Have you ever been granted an <u>academic accommodation</u>* for any of your college or university courses? * Academic accommodations include extra time on tests and exams, assistive technology, special equipment or lighting, alternate formats of print materials (e.g., Braille, PDF, mp3, large print), assistance of a scribe or reader, note-takers, captioning/transcripts, cued speech, sign language or Deaf interpreter, taped lectures and/or FM systems.	Y/N/Prefer not to say
Q2_0	Before this past semester (January-April 2020), had you ever taken an online college or university course?	Y/N
If "Yes", complete 3.1-3.11. If "No", complete 4.1-4.11.		
Q3_1	Rate the following statements based on how much you agree or disagree with them. I found it easy to stay focused… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses <u>in the past</u>*. • When I have taken in-person college or university courses <u>in the past</u>**. * This means any online college or university courses that you took before January 1, 2020. ** This means any in-person college or university courses that you took before January 1, 2020.	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_2	Rate the following statements based on how much you agree or disagree with them. I found it easy to stay on top of my readings and assignments… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses <u>in the past</u>*. • When I have taken in-person college or university courses <u>in the past</u>**. * This means any online college or university courses that you took before January 1, 2020. ** This means any in-person college or university courses that you took before January 1, 2020.	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable

Item	Survey Question	Response Style
Q3_3	Rate the following statements based on how much you agree or disagree with them. I found it easy to communicate with the instructor… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses <u>in the past*</u>. • When I have taken in-person college or university courses <u>in the past**</u>. *This means any online college or university courses that you took before January 1, 2020.* *** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_4	Rate the following statements based on how much you agree or disagree with them. I found it easy to communicate with other students… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses <u>in the past*</u>. • When I have taken in-person college or university courses <u>in the past**</u>. *This means any online college or university courses that you took before January 1, 2020.* *** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_5	Rate the following statements based on how much you agree or disagree with them. I understood what I needed to do to participate in my courses… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses <u>in the past*</u>. • When I have taken in-person college or university courses <u>in the past**</u>. *This means any online college or university courses that you took before January 1, 2020.* *** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_6	Rate the following statements based on how much you agree or disagree with them. I understood the content covered by my instructors… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses <u>in the past*</u>. • When I have taken in-person college or university courses <u>in the past**</u>. *This means any online college or university courses that you took before January 1, 2020.* *** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable

Item	Survey Question	Response Style
Q3_7	Rate the following statements based on how much you agree or disagree with them. I could access different types of course materials (e.g., video, journal articles, audio recordings) to complete my assignments… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses in the past*. • When I have taken in-person college or university courses in the past**. *This means any online college or university courses that you took before January 1, 2020. ** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_8	Rate the following statements based on how much you agree or disagree with them. If I needed alternate format materials (e.g., captioning, lecture recordings/transcripts, accessible text documents) and/or communication options (e.g., cued speech, sign-language or Deaf interpreter), I could easily obtain them… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses in the past*. • When I have taken in-person college or university courses in the past**. *This means any online college or university courses that you took before January 1, 2020. ** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_9	Rate the following statements based on how much you agree or disagree with them. I had the technology and internet connection I needed to participate in my courses. • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses in the past*. • When I have taken in-person college or university courses in the past**. *This means any online college or university courses that you took before January 1, 2020. ** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q3_10	Rate the following statements based on how much you agree or disagree with them. I knew where to go for counselling or advising if I needed it… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses in the past*. • When I have taken in-person college or university courses in the past**. *This means any online college or university courses that you took before January 1, 2020. ** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable

Item	Survey Question	Response Style
Q3_11	Rate the following statements based on how much you agree or disagree with them. If I needed an academic accommodation*, my instructor made sure to accommodate me… • When courses moved online during the COVID-19 pandemic. • When I have taken online college or university courses in the past**. • When I have taken in-person college or university courses in the past***. *An accommodation is any change that enables students with disabilities to participate equally in the environment and activities at college and university. Academic accommodations include extra time on tests and exams, assistive technology, special equipment or lighting, alternate formats of print materials (e.g., Braille, PDF, mp3, large print), assistance of a scribe or reader, note-takers, captioning/transcripts, cued speech, sign language or Deaf interpreter, taped lectures and/or FM systems.* *** This means any online college or university courses that you took before January 1, 2020.* **** This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Proceed to 5.0.		
Q4_1	Rate the following statements based on how much you agree or disagree with them. I found it easy to stay focused… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses in the past*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_2	Rate the following statements based on how much you agree or disagree with them. I found it easy to stay on top of my readings and assignments… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses in the past*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_3	Rate the following statements based on how much you agree or disagree with them. I found it easy to communicate with the instructor… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses in the past*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_4	Rate the following statements based on how much you agree or disagree with them. I found it easy to communicate with other students… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses in the past*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable

Item	Survey Question	Response Style
Q4_5	Rate the following statements based on how much you agree or disagree with them. I understood what I needed to do to participate in my courses… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past</u>*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_6	Rate the following statements based on how much you agree or disagree with them. I understood the content covered by my instructors… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past</u>*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_7	Rate the following statements based on how much you agree or disagree with them. I could access different types of course materials (e.g., video, journal articles, audio recordings) to complete my assignments… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past</u>*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_8	Rate the following statements based on how much you agree or disagree with them. If I needed alternate format materials (e.g., captioning, lecture recordings/transcripts, accessible text documents) and/or communication options (e.g., cued speech, sign-language or Deaf interpreter), I could easily obtain them… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past</u>*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_9	Rate the following statements based on how much you agree or disagree with them. I had the technology and internet connection I needed to participate in my courses. • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past</u>*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Q4_10	Rate the following statements based on how much you agree or disagree with them. I knew where to go for counselling or advising if I needed it… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past</u>*. *This means any in-person college or university courses that you took before January 1, 2020.*	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable

Item	Survey Question	Response Style
Q4_11	Rate the following statements based on how much you agree or disagree with them. If I needed an <u>academic accommodation*</u>, my instructor made sure to accommodate me… • When courses moved online during the COVID-19 pandemic. • When I have taken in-person college or university courses <u>in the past**</u>. *An accommodation is any change that enables students with disabilities to participate equally in the environment and activities at college and university. Academic accommodations include extra time on tests and exams, assistive technology, special equipment or lighting, alternate formats of print materials (e.g., Braille, PDF, mp3, large print), assistance of a scribe or reader, note-takers, captioning/transcripts, cued speech, sign language or Deaf interpreter, taped lectures and/or FM systems. ** This means any in-person college or university courses that you took before January 1, 2020.	Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree-Not applicable
Proceed to 5.0.		
Q5	If your fall 2020 semester (September-December 2020) courses take place online rather than in person, how important do you expect each of the following will be to your success? • Easy access to alternate format materials (e.g., captioning, lecture recordings/transcripts, accessible text documents) and/or communication options (e.g., cued speech, sign-language or Deaf interpreter) • Multiple options for communicating with the instructor (e.g., virtual office hours, message boards, emails, video chat, phone) • Multiple options for communicating with other students (e.g., message boards, emails, video chat, phone) • Flexible course delivery/participation (e.g., I can watch a pre-recorded lecture or participate in other course activities when it is convenient for me) • Easy access to different types of course materials (e.g., video, journal articles, audio recordings) to complete my assignments • Tutoring services • Academic advising/counselling services • Access to IT support • Opportunities to build time management and other productivity skills (e.g., online workshops, coaching) • Technology/internet connection • Clear communication about course expectations, schedules and deadlines	Not important at all-Slightly important-Moderately important-Very important-Extremely important-Not applicable
Q6_1	Before courses moved online during the COVID-19 pandemic, had you ever accessed your school's <u>academic support services*</u>? *Academic support services are sometimes known as learner support services. These services may include tutoring, learning skills workshops (e.g., time management, study skills, note taking), writing centres and academic advising. They may also help to set up accommodations such as note-taking or a reduced course load.	Y/N/Prefer not to say

Item	Survey Question	Response Style
Q6_2	Have you accessed your school's <u>academic support services*</u> since courses moved online during the COVID-19 pandemic? *Academic support services are sometimes known as learner support services. These services may include tutoring, learning skills workshops (e.g., time management, study skills, note taking), writing centres and academic advising. They may also help to set up accommodations such as note-taking or a reduced course load.*	Y/N/Prefer not to say
If "Yes" to EITHER 6.1 or 6.2, complete 6.3. If "No" or "Prefer not to say", proceed to 7.0.		
Q6_3	How did you learn about your school's academic support services? Check all that apply. • Instructor or teaching assistant • Friend or classmate • Program coordinator • Counsellor • School website • Email advertisement • Print advertisement (e.g., posters or flyers) • Online search • Other, please specify: • Prefer not to say	Check all that apply.
Q7	Were you enrolled full time or part time for the winter 2020 (January-April) semester? • Full time • Part time	Select one.

Thank you for completing the survey. This survey is part of a broader study on student accessibility and learning supports in remote learning during the COVID-19 pandemic. A final report on this study, including the results of this survey, will be published on HEQCO's website in fall 2020.