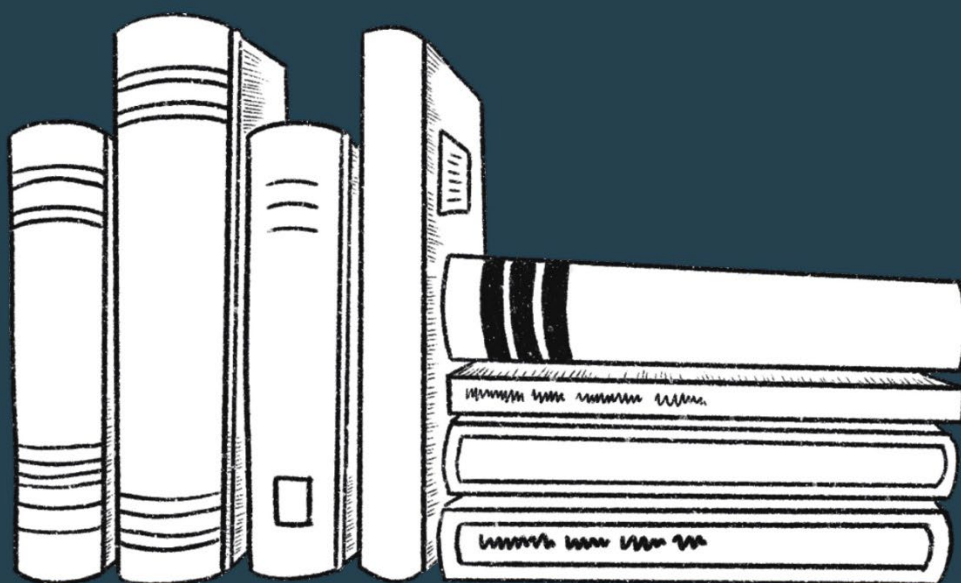


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Ontario Learning Since the COVID-19 Pandemic: An Updated Look at Student Experiences and Outcomes in 2021–2022

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Introduction

In spring 2022, HEQCO released [Ontario Learning During the COVID-19 Pandemic](#), which examined the experiences of domestic first-year postsecondary students in the wake of intermittent campus closures and other pandemic-related disruptions. The report gathered survey responses from students who experienced their first year of postsecondary education (PSE) mostly, if not entirely, online during the 2020-21 academic year. The findings suggested the pandemic restricted opportunities for students to integrate into the social and academic fabric of their institutions, complicating their transition from secondary to postsecondary.

Students frequently encounter challenges during key educational transitions, such as moving from secondary to postsecondary education, and progressing from their first to second year. Conceptual models of academic departure underscore that a student's likelihood of persistence is associated with their ability to integrate academically and socially (Carter et al., 2020; Tinto, 1975; 1993). Student integration is related to several factors: characteristics students bring with them (such as their family background and level of preparation for postsecondary) (Robbins et al., 2004, Brown et al., 2008); how students experience their institutions, which influences their sense of well-being and belonging during their studies (Ma & Frempong, 2008; Nicpon et al., 2006); and the supports and services institutions provide to help ensure student success (Inkelas et al., 2018).

For many students, the emergency shift to remote learning in 2020 affected each of these factors. Learning disruptions in high school contributed to gaps in the knowledge and skills that incoming cohorts need to feel adequately prepared (Hammerstein et al., 2021). Students reported several challenges related to self-efficacy, including difficulty focusing, engaging and staying on top of workload ([Pichette et al., 2020](#)). These impacts also jeopardized student well-being and satisfaction. Many students' economic situations were upended as lockdowns saw rising unemployment and layoffs, particularly among young Canadians (Statistics Canada, 2021) — these financial strains weighed heavily on many students (Wall, 2020). Uncertainties about academic expectations and supports ([Pichette et al., 2020](#)) and concerns relating to students' health and the health of their loved ones (Ewing et al., 2022) compounded financial anxieties. Remote learning and service provision posed difficulties for interactivity and social connection ([Pichette et al., 2020](#)). Together, these stressors contributed to mental health concerns among students who did not face these challenges previously (Ewing et al., 2022) and contributed to low satisfaction with their educational experiences ([Napierala et al., 2022](#)).

This report expands and builds upon HEQCO's previous work to monitor pandemic impacts as they continued to evolve from an era of campus closures to a return to in-person classrooms. It draws on a survey of approximately 1,000 first- and second-year domestic and international students to understand their experiences during the 2021-22 academic year. Unlike HEQCO's previous survey cohort (2020-21), most Ontario postsecondary students during the 2021-22 year experienced, or had the opportunity to experience, a mix of online and in-person learning; courses took place primarily online in the fall 2021 semester, and in-person learning largely resumed in winter 2022. This report summarizes survey findings from that period and offers reflections for postsecondary leaders to consider as they support student success in the years ahead.

Research Questions and Methodology

This project answered the following research question: How did first- and second-year students describe their experience of the 2021-22 academic year, and in particular, factors known to affect persistence, such as preparation and well-being?

In the summer of 2022, HEQCO worked with Academica Group to conduct a non-random, voluntary online survey of 999 students¹ who had completed their first or second year of college or university in Ontario that spring. Students were asked a variety of questions relating to their demographic characteristics, the impact of the pandemic, the challenges they faced related to course work and their broader postsecondary experience, including perceptions of their institution. Survey questions used for analysis in this report are available in Appendix A. During the data collection process, survey quotas were applied to ensure a diverse set of student respondents.² Descriptive statistical analysis was conducted in Stata 17, and the sample was weighted to match the Ontario PSE student population by gender, international/domestic student status and type of institution.³ Table 1 displays the weighted distribution of self-reported characteristics among the sample population.

Table 1

Weighted Distribution of Sample Characteristics

Sample Characteristics	Weighted Proportion of Sample
<i>Student Status⁴</i>	
Domestic Students	78%
International Students	21%
<i>Institution Type</i>	
College Students	34%
University Students	66%
<i>Age Group</i>	
<=20 years old	70%
21 to 24 years old	13%
>=25 years old	17%
<i>Gender</i>	
Men	46%
Women and Another Gender Identity ⁵	52%
<i>Family Income</i>	
< \$50,000	40%
\$50,000 to \$100,000	34%

¹ Students must have been enrolled with full-time status for a minimum of two months to participate in the survey.

² Survey quotas were used to increase representation based on gender, race, household income, international/domestic student status and institution type.

³ The population data used to derive the sample weights is from the [2019-20 Postsecondary Student Information System \(PSIS\)](#). Because weighting was based on a small number of particular characteristics, the weighted sample may not match the Ontario student population on other characteristics such as race or age.

⁴ In the 2021-22 fiscal year, international students comprised 19% of total full-time enrolment at Ontario's publicly assisted universities, and 39% of total full-time enrolment at Ontario's publicly assisted colleges. Source: Ontario Ministry of Colleges and Universities (2023), Open SIMS MCU Data Compass: Students, Clients and Graduates Served.

⁵ A small number of survey respondents indicated "Another Gender Identity." Different approaches have been used in reporting non-binary responses, including removal, aggregation and imputation. For this report, we have used an aggregation approach to ensure non-binary responses are included. The original question and response options are available in Appendix A.

Sample Characteristics	Weighted Proportion of Sample
\$100,000 to \$150,000	19%
> \$150,000	7%
<i>Race/Ethnic Background</i>	
Students with Other Ethnic Backgrounds ⁶	11%
White Students	36%
Southeast Asian Students	4%
South Asian Students	20%
Mixed-race Students	9%
East Asian Students	8%
Black Students	11%
<i>Disability</i>	
Students without Disabilities	79%
Students with Disabilities	15%
Prefer not to answer	7%

n = 999

Note: Percentages in each category may not add up to 100% due to rounding or non-responses.

The timing of the survey had implications for the representativeness of the sample, so results should not be considered representative of the entire student population. As the survey was administered during the summer, students who were most at risk of not persisting during the previous school year may have left the postsecondary system and were less likely to be present in the sample. Since the sampling was non-random, results cannot be generalized to the entire student population. Cash incentives for participation may have introduced further sample bias, and recall bias may affect answers to questions about experiences that were less proximate to the survey's administration.

The 2022 survey included first- and second-year, domestic, international, direct- and indirect-entry PSE students, 70% of whom were 20 years old or younger. These students encountered a mix of online and in-person learning as pandemic restrictions eased. The 2021 survey was administered to domestic first-year students entering postsecondary directly from high school. These students were primarily enrolled in online and remote learning during their first PSE year. Differences between the samples of respondents across the two surveys limit the extent of the comparisons we can make between them; we offer illustrative comparisons where results warrant discussion.

Data Presentation and Analysis

Lower-Income and Younger Students Felt Less Prepared for PSE

Most respondents considered themselves 'moderately' to 'fully' prepared academically for PSE (83%). Responses varied substantially by students' background characteristics. These included their family income, age and international student status.⁷

⁶ This category aggregates students who selected "Another, please specify:" and wrote in their own response to the question "How do you identify?" in terms of race and/or ethnic background. These responses vary widely and include, for example, "Caribbean," "European," "French Canadian," "East African," "Central Asian," "Turkish," etc. Rather than recategorize these responses to align with the categories provided in the question, we grouped them together. By selecting the "Another, please specify:" response these individuals indicated that they did not personally identify with the other response categories. The original question and response options can be viewed in the questionnaire in Appendix A.

⁷ See Table 2 in Appendix B for the breakdowns by student characteristics.

Students with family income greater than \$150,000 per year rated themselves as ‘fully’ or ‘very’ prepared in much higher proportions (61%) than students from less affluent backgrounds (who were ‘fully’ or ‘very’ prepared at a rate between 39% and 44%). These were also the students least likely to report difficulty balancing school with personal responsibilities, such as a job or caregiving.

Parental income is known to affect a student’s likelihood of attending and graduating from PSE (Van Bussel & Fecteau, 2022); during the pandemic, higher incomes likely provided insulation against economic and educational disruptions. Media reporting also suggested higher-income families had resources to learn at home more effectively, including access to private tutors, more reliable internet connections and less turbulence, and were more inclined to opt for in-person learning when given the choice (Yang & Kennedy, 2020). Ontario elementary schools in low-income areas experienced higher rates of COVID-19 infection (and by extension, greater disruption) than those in neighbourhoods with higher median parental income (Srivastava et al., 2023).

A greater share of students 25 years or older rated themselves as fully prepared than their younger peers. Only 15% of those aged 20 and under rated themselves as fully prepared compared to 20% of students aged 21 to 24 and 43% of students over 25. More respondents aged 20 and under (38%) reported that their high school courses did not cover the content expected by their postsecondary instructors than students aged 21 to 24 (26%). Similarly, 31% of students aged 20 and under did not remember the relevant content from high school, versus 24% of students aged 21 to 24.

The disparity between the two younger groups appears to be connected to pandemic disruptions during high school. Most 21 to 24-year-olds graduated high school *prior* to the pandemic; and unlike their peers aged 20 and younger, these students did not experience any major disruptions to the normal format of their senior years. The difference between age groups was even more pronounced when considering their exam experience: 39% of students aged 20 and under identified not having enough experience with exams as a reason for being under-prepared, as opposed to 19% of students aged 21 to 24. To help make up for lost instructional time and reduce student stress, Ontario cancelled final exams and suspended standardized tests early in the pandemic (Pringle, 2020; Freeman, 2020), suggesting that students graduating high school in 2020 and in subsequent pandemic years had fewer opportunities to gain test-taking experience before entering postsecondary.

One aspect of feeling academically prepared is retaining relevant knowledge learned in secondary school. On a more positive note, 30% of the 2021-22 cohort reported ‘not remembering’ or ‘not learning’ relevant content in high school as opposed to 45% of the 2020-21 cohort, who were all domestic, direct-entry and first-year students ([Napierala et al., 2022](#)). The earlier cohort might be expected to remember high school content because they were closer to that experience. The 2021-22 sample included students who encountered a gap between K-12 and PSE and/or did not complete secondary school in Ontario. Despite this broader range of backgrounds, fewer students reported ‘not remembering’ relevant content. Pandemic-related learning loss may have a long tail, but it appears that the students who were in Grade 11 or 12 at the height of the lockdowns were most acutely affected. As normal high school routines resumed, new cohorts of students had a better sense of preparation for PSE.

International students were also much more likely to rate themselves as ‘fully’ or ‘very’ prepared (67%) than domestic students (37%), but this considerable gap should be interpreted with caution. Despite having high levels of academic achievement,⁸ international students often experience something called “education shock” as they adjust to differences in educational approaches and expectations ([Colyar et al., 2023](#)). This introduces additional challenges, relative to domestic students, regarding PSE preparation and integration. Namely, many international students contend with the compounding effects of acculturating to a new learning environment, in a non-native language, with a much greater emphasis on collaborative and active learning than many non-western paradigms (Fischer, 2021; Howe et al., 2023). These difficulties may not be captured in our survey results as individuals coming from collectivist cultures like China and India (two of the top source countries for Ontario international students)⁹ have a documented tendency to respond to questionnaires more positively to maintain social desirability (Lalwani et al., 2006; Fang et al., 2016; Kemmelmeier, 2016).

Students Reported Difficulties with Transferable Skills

While there was variation in the extent to which students felt prepared for PSE, most students in our survey experienced challenges with transferrable skills. These challenges were consistent across background characteristics. Most of the students’ difficulties related to their feelings of self-efficacy and motivation and the transferable skills needed to improve these feelings. Transferable skills like time management and organization are key to postsecondary success, particularly in remote, asynchronous environments ([Pichette et al., 2020](#)). Students reported difficulty staying focused (60%), staying on top of workload (50%), having necessary time management and organizational skills (50%) and communicating with classmates (46%). These difficulties may relate to the mix of course formats students encountered during the academic year and the need to integrate into both physical and virtual dimensions of PSE, with synchronous online courses being most common (40%), followed by asynchronous online courses (21%) and in-person courses (18%).

Our survey results suggest that these challenges may have become less pronounced as pandemic restrictions eased. Students in HEQCO’s previous survey reported difficulties focusing in class and difficulties communicating with classmates at higher rates (12% and 19% higher, respectively). These differences may reflect the fact that the 2022 sample included older, more experienced students, but they might also reflect students finding a more suitable balance of course formats as in-person course options returned alongside a greatly expanded suite of online and hybrid courses ([Lanthier et al., 2023](#)), as well as physical access to campus and community study spaces as campuses re-opened.

Students Cited Importance of Course Formats, UDL Principles

Most students, regardless of background characteristics (69% overall), rated course format as a ‘very’ or ‘extremely important’ factor in their course selections;¹⁰ this rating was even more common among students 25 and older (76%), international students (81%) and college students (78%). Mature students (those who do not transition directly from high school) and international students are known to have particularly strong preferences about format. Studies suggest a

⁸ China, one of the top source countries for Ontario international students, had the highest performing 15-year-olds of any country on the 2018 Programme for International Student Assessment (PISA) (OECD, 2019).

⁹ At the time our survey was conducted, India and China were the top source countries of international students arriving in Ontario, accounting for more than half of all international students (Colyar et al., 2023).

¹⁰ See Figure 1 in Appendix B.

heightened demand for online learning among mature students, who are more likely to have external priorities like dependents or work that may be easier to balance with a flexible or remote learning environment ([Effah et al., 2023](#); Pizarro Milian, 2023) and a lower demand among international students, who may find it easier to integrate into postsecondary life when they can be physically present on campus and immersed in Canadian culture (Pizarro Milian, 2023). For these groups in particular, having the agency to choose the right mix of online, hybrid and in-person courses may have contributed to their overall sense of self-efficacy and, in turn, their academic integration and persistence.

Students also generally agreed that they were more academically successful in courses that integrated Universal Design for Learning (UDL) principles, which promote inclusive instructional practices and support accessibility.¹¹ For example, 83% ‘strongly agreed/agreed’ they were more successful in courses with accessible materials and 77% said the same about being able to choose between multiple different ways of demonstrating their learning. Providing accessible materials and allowing students to express comprehension in multiple ways align with core UDL principles (CAST, 2018). Seventy-nine percent of students indicated the approachability of instructors was helpful, echoing previous research that revealed students with disabilities are more likely to seek support and feel included when their instructors demonstrate approachability and invite consultation (Orr & Bachman, 2009). Eighty-one percent of students considered clear alignment between lesson content and overall course objectives as conducive to their success, keeping with UDL’s emphasis on heightening the salience of goals and objectives (CAST, 2018). UDL’s positive impacts on student learning are well-documented, and HEQCO has recommended institutions incorporate the framework across programs and services ([Courts et al., 2023](#), [Pichette et al., 2020](#)).

Mental Health Was an Ongoing Concern, Particularly for Students with Disabilities, Women and Gender-diverse Respondents

With the immediate pressures of the pandemic beginning to recede, our survey explored whether students indicated improvements in their sense of belonging, well-being and overall satisfaction, all of which influence their opportunities for integration and academic success (Ma & Frempong, 2008; Nicpon et al., 2006; Ketchen Lipson & Eisenberg, 2017; Schreiner & Nelson, 2013).

Fifty-seven percent of all students surveyed indicated that maintaining their mental health was difficult during the 2021-22 year. This response was especially common among students with disabilities (72%), women and gender-diverse students (75%) and students aged 20 years or younger (64%). Statistics Canada data (2023) indicates that people with disabilities, women and gender-diverse people and youth all reported experiencing poor mental health more frequently than their male, non-disabled and/or older counterparts. The economic, academic and health-related uncertainties of the pandemic, as well as feelings of loneliness and isolation, likely intensified mental health challenges (Patterson et al., 2021). Given the established relationship between mental health and persistence, these findings are cause for concern (Ketchen Lipson & Eisenberg, 2017). The proportion of international students reporting mental health as a challenge (35%) was markedly lower than domestic students (63%), but we know from prior

¹¹ UDL is an evidence-based framework that aims to address learning barriers and differences and empower students to engage with and demonstrate their learning according to their needs, preferences and worldviews (CAST, 2018; Fovet, 2020).

research that international students can be reluctant to disclose mental health struggles (de Moissac et al., 2020).

Overall Satisfaction Was Positive, but Less So for Students with Disabilities

Students' overall opinions of their postsecondary experiences were positive:¹² 78% of students rated their entire educational experience at their institution as 'excellent' (23%) or 'good' (55%), which was slightly higher than the National Survey of Student Engagement (NSSE) 2020 statistic¹³ for Ontario first-year university students (76%) (Common University Data Ontario, 2020).¹⁴ These overall positive assessments mirrored students' reported perceptions of their ability to focus and communicate with classmates. Students reported generally positive experiences with all course formats listed in the survey (i.e., synchronous, asynchronous, hybrid and in-person). Positive experiences with the formats themselves, and generally high rates of satisfaction, may have reflected improvements in the quality of teaching with the various formats as faculty and staff switched from emergency to planned remote delivery, as well as students' agency to select formats that worked best for them.

Students with disabilities were slightly less satisfied (74%) than those without (80%) and 10% less likely to rate their experience as 'excellent' (15% versus 25%). Students with disabilities also felt less like a part of the community at their institution than students without (58% versus 76%) and felt less comfortable 'being themselves' at their institution (83% versus 91%).¹⁵ Previous HEQCO research documented the increased challenges students with disabilities faced in the emergency shift to remote learning in contrast to previous in-person or online courses, as well as in contrast to students without disabilities ([Pichette et al., 2020](#)).

Conclusions and Recommendations

HEQCO's previous report, [Ontario Learning During the COVID-19 Pandemic](#), documented some of the ways in which the pandemic's disruptions complicated the transition into postsecondary for students during the 2020-21 academic year. As public health measures relaxed, so too did some uncertainties and stressors facing students during that transition. The 2021-22 survey results suggest that certain threats to student integration and persistence described in our previous report may have diminished as in-person courses resumed and students regained access to their physical campuses.

Some threats, however, appeared to remain. UNESCO reported a learning loss of two thirds of an academic year, on average and worldwide, from school closures (Wong, 2021), and our survey indicated ongoing threats to students' sense of academic preparedness, self-efficacy, satisfaction and well-being: all of which are known to affect persistence. The students we surveyed who entered postsecondary from high school reported gaps in their learning, and this was particularly true for students from lower-income backgrounds. We should assume current cohorts will bring similar, albeit smaller, gaps in learning, stemming from disruptions in K-12. Institutions can develop strategies to equitably address these potential learning losses and find

¹² See Figure 2 in Appendix B for students' evaluation of their overall learning experience at their institution by characteristics.

¹³ The 2020 NSSE was administered between February and May of 2020, so some respondents would have completed the survey while the pandemic was unfolding. These students would have experienced most of the academic year without disruption. NSSE is administered every three years; the 2023 results were not available at the time of publication.

¹⁴ It was also higher in contrast to HEQCO's previous survey, in which just 30% rated their experience highly (i.e., indicated being either 'extremely' (7%) or 'very' (23%) satisfied) (Napierala et al., 2022).

¹⁵ Responses were otherwise consistent across student characteristics.

opportunities to develop skills, like time management and organization, so students are well-positioned to stay on top of their workloads. Institutions should also ensure accessible, reliable information about mental health supports is widely distributed to incoming students, with targeted outreach to students with disabilities as well as women and gender-diverse students, who expressed challenges in higher numbers.

Institutions can also work to improve satisfaction and well-being by providing students with autonomy in selecting course formats. Survey results remind us that a return to in-person learning did not improve satisfaction for all learners, but providing students with the agency to select learning formats that suit their needs did lead to generally positive experiences with all formats, including online and hybrid. Incorporating UDL principles and ensuring appropriate learning supports and accommodations are in place is another exemplary strategy institutions have at their disposal for improving satisfaction and well-being. Institutions can strive to ensure faculty have opportunities to engage in UDL trainings; courses can be designed to improve integration for all learners, including those with accessibility needs.

Ontario's international student enrolments have grown dramatically since Canada's International Education Strategy was introduced in 2014. Many of the international students arriving on Ontario campuses face a range of academic and personal challenges that are negatively affecting their postsecondary experiences ([Colyar et al., 2023](#)), yet their survey responses suggested otherwise. It is essential that postsecondary institutions enrolling international students test and identify effective ways of understanding this group of learners' experiences so they can develop strategies to support international student persistence and wellbeing. Alternative methods to explore may include peer-led focus groups or interviews, for example.

The pandemic's impacts on postsecondary persistence were not equitable, and its effects are likely to continue as students who encountered learning losses during school closures (both during K-12 and PSE) transition through higher education. As HEQCO continues to monitor the effects of the pandemic on student achievement in the years ahead, we will explore methods of engaging all students (with a particular focus on international students, students with disabilities, those experiencing mental health challenges, and those from less affluent backgrounds) to understand their unique experiences. Institutions and government should do so as well.

References

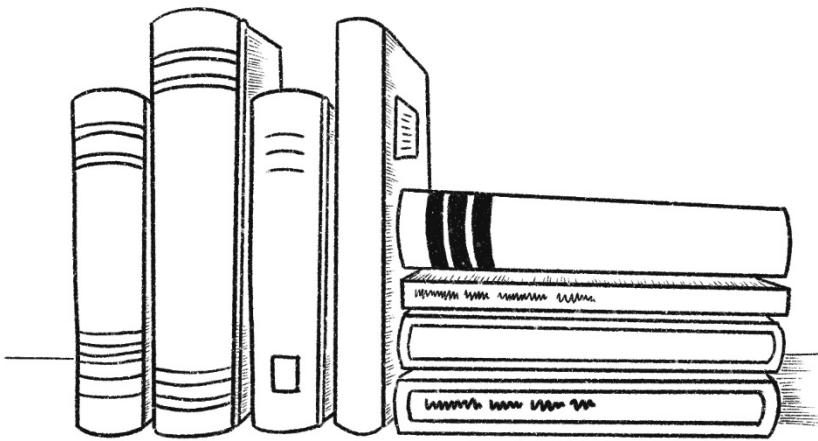
- Brown, S. D., Tramayne, S., Hoxha, D., Telander, K., Fan, X., & Lent, R. W. (2008). Social cognitive predictors of college students' academic performance and persistence: A meta-analytic path analysis. *Journal of Vocational Behavior*, 72(3), 298–308. <https://doi.org/10.1016/j.jvb.2007.09.003>
- Carter, D.F., Locks, A.M. & Winkle-Wagner, R. (2020). The college transitions process: When many ships collide. In R. Winkle-Wagner & A.M. Locks (Eds.), *Diversity and inclusion on campus: Supporting students of color in higher education* (2nd ed.). (pp. 81–109).
- CAST. (2018). *The UDL guidelines*. <https://udlguidelines.cast.org/>
- Colyar, J., Pichette, J., & Deakin, J. (2023). *Matching rapid growth with adequate supports: How colleges and government can enhance international student experiences in Ontario*. Toronto: Higher Education Quality Council of Ontario. <https://heqco.ca/pub/matching-rapid-growth-with-adequate-supports-how-colleges-and-government-can-enhance-international-student-experiences-in-ontario/>
- Common University Data Ontario. (2020). *Table F1a: The NSSE (National Survey of Student Engagement) evaluation results from 2020 NSSE survey*. https://cudo.ouac.on.ca/page.php?id=7&table=29#univ=1,2,3,8,9,11,12,14,16,17,21,22,23,24,25,27,28,29,30,31,32,33,34,42&topic=F&table_hidden=5&y=2020
- Courts, R., Chatoor, K., Pichette, J., Okojie, O., & Tishcoff, R. (2023). *HEQCO's dialogues on Universal Design for Learning: Finding common ground and key recommendations from the sector*. Higher Education Quality Council of Ontario. <https://heqco.ca/pub/heqcos-dialogues-on-universal-design-for-learning-finding-common-ground-and-key-recommendations-from-the-sector/>
- de Moissac, D., Graham, J. M., Prada, K. Gueye, N. R., Rocque, R. (2020). Mental health status and help-seeking strategies of international students in Canada. *Canadian Journal of Higher Education*, 50(4), 52–71. <https://doi.org/10.47678/cjhe.vi0.188815>
- Effah, H., Brumwell, S., de Leon, M., & Pichette, J. (2023). *What's driving student decisions? Analyzing 2022 Ontario college application data*. Higher Education Quality Council of Ontario. <https://heqco.ca/pub/whats-driving-student-decisions-analyzing-2022-ontario-college-application-data/>
- Ewing, L., Hamza, C. A., Walsh, K., Goldstein, A. L., & Heath, N. L. (2022). A qualitative investigation of the positive and negative impacts of the COVID-19 pandemic on post-secondary students' mental health and well-being. *Emerging Adulthood*, 10(5), 1312–1327. <https://doi.org/10.1177/21676968221121590>
- Fang, J., Prybutok, V., & Wen, C. (2016). Shirking behavior and socially desirable responding in online surveys: A cross-cultural study comparing Chinese and American samples. *Computers in Human Behavior*, 54, 310–317. <https://doi.org/10.1016/j.chb.2015.08.019>
- Fischer, K. (2021, May 7). The pandemic put a mental-health strain on international students. Here's how colleges can meet their needs. *The Chronicle of Higher Education*.

<https://www.chronicle.com/article/the-pandemic-has-put-a-mental-health-strain-on-international-students-heres-how-colleges-can-meet-their-needs>

- Fovet, F. (2020). Universal design for learning as a tool for inclusion in the higher education classroom: Tips for the next decade of implementation. *Education Journal*, 9(6), 163–172. <https://doi.org/10.11648/j.edu.20200906.13>
- Freeman, J. (2020, March 19). Ontario cancels standardized tests for students due to pandemic. *CTV News*. <https://toronto.ctvnews.ca/ontario-cancels-standardized-tests-for-students-due-to-pandemic-1.4860392>
- Hammerstein, S., Konig, C., & Frey, A. (2021). Effects of COVID-19-related school closures on student achievement — a systematic review. *PsyArXiv*. <https://psyarxiv.com/mcnvk/>
- Howe, E. R., Ramirez, G., & Walton, P. (2023). Experiences of international students at a Canadian university: Barriers and supports. *Journal of Comparative & International Higher Education*, 15(2), 115–133. <https://eric.ed.gov/?id=EJ1381323>
- Inkelas, K. K., Jessup-Anger, J., Benjamin, M., & Wawrzynski, M. (2018). The living-learning community pyramid. *The Talking Stick*. https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1553&context=edu_fac
- Kemmelmeier, M. (2016). Cultural differences in survey responding: Issues and insights in the study of response biases. *International Journal of Psychology: Journal International de Psychologie*, 51(6), 439–444. <https://doi.org/10.1002/ijop.12386>
- Ketchen Lipson, S., & Eisenberg, D. (2017). Mental health and academic attitudes and expectations in university populations: Results from the healthy minds study. *Journal of Mental Health*, 27(3), 205–213. <https://www.tandfonline.com/doi/citedby/10.1080/09638237.2017.1417567?scroll=top&needAccess=true&role=tab>
- Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology*, 90(1), 165–178. <https://doi.org/10.1037/0022-3514.90.1.165>
- Lanthier, S., Colyar, J., & Deakin, J. (2023). *Ontario college and university investments in digital learning during the pandemic*. Higher Education Quality Council of Ontario. <https://heqco.ca/pub/ontario-college-and-university-investments-in-digital-learning-during-the-pandemic/>
- Ma, X., & Frempong, G. (2008). *Reasons for non-completion of postsecondary education and profile of postsecondary dropouts*. Human Resources and Social Development Canada. https://publications.gc.ca/collections/collection_2008/hrsd-rhsc/HS28-143-2008E.pdf
- Napierala, J., Pilla, N., Pichette, J., & Colyar, J. (2022). *Ontario learning during the COVID-19 pandemic: Experiences of Ontario first-year postsecondary Students in 2020–21*. Higher Education Quality Council of Ontario. https://heqco.ca/wp-content/uploads/2022/03/Ontario-Student-Experiences-with-COVID_FINAL.pdf
- Nicpon, M. F., Huser, L., Blanks, E. H., Sollenberger, S., Befort, C., & Kurpius, S. E. R. (2006). The relationship of loneliness and social support with college freshmen's academic

- performance and persistence. *Journal of College Student Retention: Research, Theory & Practice*, 8(3), 345–358. <https://doi-org.myaccess.library.utoronto.ca/10.2190/A465-356M-7652-783R>
- OECD. (2019). *PISA 2018 results (Volume I): What students know and can do*. Organisation for Economic Cooperation and Development. <https://www.oecd-ilibrary.org/deliver/a9b5930a-en.pdf?itemId=/content/component/a9b5930a-en&mimeType=pdf>.
- Orr, A., & Bachman, S. (2009). Inclusive postsecondary strategies for teaching students with learning disabilities: A review of the literature. *Learning Disabilities Quarterly*, 32(3), 181–196. <https://web-p-ebSCOhost.com.myaccess.library.utoronto.ca/ehost/pdfviewer/pdfviewer?vid=0&sid=c5f2d8df-e327-443f-aec6-a4503ab067b8%40redis>
- Patterson, Z. R., Gabrys, R. L., Prowse, R. K., Abizaid, A. B., Hellemans, K. G. C., & McQuaid, R. J. (2021). The influence of COVID-19 on stress, substance use, and mental health among postsecondary students. *Emerging Adulthood*, 9(5), 516–530. <https://journals.sagepub.com/doi/pdf/10.1177/21676968211014080>
- Pichette, J., Brumwell, S., & Rizk, J. (2020). *Improving the accessibility of remote higher Education: Lessons from the pandemic and recommendations*. Higher Education Quality Council of Ontario. https://heqco.ca/wp-content/uploads/2020/10/Formatted_Accessibility_FINAL.pdf
- Pizarro Milian, R. (2023, August 2). Who wants online learning? *Academica Forum*. <https://forum.academica.ca/forum/who-wants-online-learning>
- Pringle, J. (2020, April 29). Ontario cancels final exams for high school students due to COVID-19 pandemic. *CTV News*. <https://ottawa.ctvnews.ca/ontario-cancels-final-exams-for-high-school-students-due-to-covid-19-pandemic-1.4918295>
- Robbins, S. B., Lauver, K., Huy, L., Davis, D., Langley, R. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130(2), 261–288. <https://www.proquest.com/docview/614460569?accountid=14771&parentSessionId=qp2cVILGRTbw6Xubv3YSOIcgAz55%2FS88%2Bp6XLxPCxaw%3D&pq-origsite=primo>
- Srivastava, P., Lau, N. T. T., Ansari, D., & Thampi, N. (2023). Effects of school-level and area-level socio-economic factors on elementary school student COVID-19 infections: A population-based observational study. *BMJ Open*, 13(3), e065596. <https://doi.org/10.1136/bmjopen-2022-065596>
- Statistics Canada. (2021). *COVID-19 in Canada: A one-year update on social and economic impacts*. <https://www150.statcan.gc.ca/n1/pub/11-631-x/11-631-x2021001-eng.htm#shrpg0>
- Statistics Canada. (2023, March 30). *Table 45-10-0082-01: Perceived health, by gender and other selected sociodemographic characteristics*. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=4510008001>

- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Education Research*, 45(1), 89–125.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. University of Chicago Press.
<https://www.bibliovault.org/BV.landing.epl?!ISBN=9780226804491>
- Van Bussel, M., & Fecteau, E. (2022). *Persistence and graduation indicators of postsecondary students by parental income, 2012/2013 entry cohort*. Statistics Canada.
<https://www150.statcan.gc.ca/n1/en/pub/81-595-m/81-595-m2022005-eng.pdf?st=0kq0msnW>
- Wall, K. (2020). *COVID-19 pandemic: Financial impacts on postsecondary students in Canada*. Statistics Canada. <https://files.eric.ed.gov/fulltext/ED605392.pdf>.
- Wong, J. (2021, January 31). Disrupted schooling, learning loss will have effects long after pandemic, say education experts. *CBC News*. <https://www.cbc.ca/news/pandemic-learning-gap-unesco-report-1.5888860>
- Yang, J. & Kennedy, B. (2020, September 12). As wealthy parents turn to learning pods and private schools, low-income families say they're being forced to choose between their health and their kids' education. *Toronto Star*. https://www.thestar.com/news/gta/as-wealthy-parents-turn-to-learning-pods-and-private-schools-low-income-families-say-they/article_1096569d-a055-5112-acb4-f8c113e8a7e4.html



Ontario Learning Since the COVID-19 Pandemic: An Updated Look at Student Experiences and Outcomes in 2021–22

Appendix

Appendix A: Questionnaire

Item	Survey Question	Response Type
0.1	Were you enrolled with full-time status at a college/university in Ontario during any part of the 2021-22 school year (September 2021 – April 2022)? Response options: Yes; No	Select one
	If “No”, screen out.	
0.2	What is your current year of study in college/university? Response options: 1;2;3;4 or more	Select one
	If “3” or “4 or more” screen out.	
1	How long were you enrolled at a college/university during the 2021-22 school year (not including summer sessions)? Response options: less than 2 months; more than 2 months but less than half of the regular school year; about half of the regular school year; more than half, but less than the entire regular school year; the entire regular school year.	Select one
	If “less than 2 months”, screen out.	
2	Please indicate the year you graduated from high school. Response options: 2017 or earlier; 2018; 2019; 2020; 2021	Select one
3	What is your age? Response options: 17 or younger; 18; 19; 20; 21; 22; 23; 24; 25 or older	Select one
4	What is your gender? Response options: Woman; Man; Another gender identity; Prefer not to answer	Select one
5	What is your current immigration status? Canadian citizen/Permanent resident Student visa/Another type of visa Another status in Canada	Select one
6	Do you identify as Aboriginal/Indigenous: i.e. First Nations (North American Indian), Métis, or Inuk (Inuit)? Response options: Yes; No; Prefer not to answer	Select one
7	How do you identify? Select all that apply: Arab Black East Asian (e.g., Chinese, Korean, Japanese, etc.) Latin American South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.) Southeast Asian (e.g., Filipino, Vietnamese, Cambodian, Laotian, Thai, etc.) White West Asian (e.g., Iranian, Afghan, etc.) Another, please specify: _____ Prefer not to answer	Select all that apply
8	What is your best estimate of your family’s total household income for 2021? Less than \$50,000 \$50,000 to less than \$100,000 \$100,000 to less than \$150,000 \$150,000 or above Prefer not to answer	Select one
9	How many hours do you spend in a typical 7-day week working for pay?	Select one

	Response options: 0; 1-5; 6-10; 11-15; 16-20; 21-25; 26-30; more than 30 (hours per week)	
10	What type of institution did you attend for the 2021-22 school year? Response options: College; University	Select one
	If “College”, complete 11.0; if “University”, complete 11.1.	
11.0	What is the name of the college you attended during the 2021-22 school year? [All Ontario colleges as response options]	Select one from dropdown list
	If Q1 == 1 the proceed to 13.0. Else proceed to 12.0.	
11.1	What is the name of the university you attended during the 2021-22 school year? [All Ontario universities as response options]	Select one from dropdown list
	If Q1 == 1 the proceed to 13.0. Else proceed to 12.0.	
12.0	Did you attend the same institution during the 2020-21 school year? Response options: Yes; No	Select one
	If “Yes” proceed to 13.	
12.1	Why didn't you attend the same institution last year? Select all that apply: I was enrolled at a different university/college. I was studying abroad. I was taking time off for family reasons (e.g., I have child or eldercare responsibilities). I was working. I was travelling or on vacation. Issues related to the COVID-19 pandemic. Other personal reasons. Other, please specify:	Select all that apply
	If “issues related to the COVID-19 pandemic” is NOT select selected go to 13.0.	
12.2	Was your decision not to attend the same institution last year related to any of the following disruptions caused by the COVID-19 pandemic? Personal illness Too many online classes Lack of in-person experiences outside the classroom New/additional family responsibilities New/additional work responsibilities Uncertainty due to changing circumstances related to the COVID-19 pandemic Other reasons related to the pandemic, please specify:	Select all that apply
13.0	Do you plan to return to the same institution for the next school year (2022-23)? Response options: Yes; No	Select one
	If “Yes” proceed to 13.7.	
13.1	Why won't you continue at the same institution next year? Select all that apply: Issues related to the COVID-19 pandemic. I will have graduated. I plan to study abroad at a different institution. I'm not confident I will complete my degree/diploma. I'm taking time off for family reasons (e.g., I have child or eldercare responsibilities).	Select all that apply

	<p>I have new or additional responsibilities at my job (e.g., working longer hours, work is more stressful, etc.).</p> <p>I have personal reasons (other than those mentioned above).</p> <p>I plan to enroll at a different university or college.</p> <p>Other reason, please specify: _____</p>	
	If “issues related to the COVID-19 pandemic” is NOT selected go to 13.7.	
13.2	<p>Is your decision not to attend the same institution next year related to any of the following disruptions caused by the COVID-19 pandemic?</p> <p>Personal illness</p> <p>Too many online classes</p> <p>Lack of in-person experiences outside the classroom</p> <p>New/additional family responsibilities</p> <p>New/additional work responsibilities</p> <p>Uncertainty due to changing circumstances related to the COVID-19 pandemic</p> <p>Other reasons related to the pandemic, please specify: _____</p>	Select all that apply
13.7	<p>What is your biggest concern heading into the 2022-23 school year?</p> <p>My finances</p> <p>My physical health</p> <p>My mental health</p> <p>Personal relationships (e.g., making new friends, finding a romantic partner, roommates, etc.)</p> <p>Living away from home</p> <p>The health of my family members or loved ones</p> <p>My academic performance or grades</p> <p>My ability to find suitable housing</p> <p>Finding work after graduation</p> <p>Other, please specify: _____</p> <p>Not applicable (e.g., I will not be returning to school next year)</p>	Select one
14	<p>What is your main field of study in your college/university program?</p> <p>Science and science technology</p> <p>Engineering and engineering technology</p> <p>Mathematics and computer and information sciences</p> <p>Business and administration</p> <p>Arts and humanities</p> <p>Social and behavioural sciences</p> <p>Legal professions and studies</p> <p>Health care</p> <p>Education and teaching</p> <p>Trades, services, natural resources, and conservation</p> <p>Other, please specify: _____</p>	Select one
15	<p>Did you live on campus at your college/university during the 2021-22 school year?</p> <p>Response options: Yes; No</p>	Select one
16	<p>Do you have a disability or condition that impacts your learning, working or living activities?</p> <p>Response options: Yes; No; Prefer not to answer</p>	Select one

17	<p>Coming out of high school, how prepared were you academically for college/university?</p> <p>Response options: Fully prepared; Very prepared; Moderately prepared; Slightly prepared; Not at all prepared</p>	Select one
	If “Fully Prepared”, skip to 18.	
17.1	<p>In what ways were you not fully prepared academically for college/university? Select all that apply:</p> <p>I did not take enough high school courses relevant to my college/university program.</p> <p>I did not adequately understand content covered by my relevant high school courses.</p> <p>My high school courses did not cover content that my college/university instructors expected me to know.</p> <p>I did not remember content covered by my relevant high school courses.</p> <p>I lacked math skills.</p> <p>I lacked English language skills (e.g., writing, reading, speaking).</p> <p>I lacked time management/organizational skills.</p> <p>I lacked digital literacy skills (e.g., familiarity with computers, online resources, and videoconferencing software).</p> <p>I lacked interpersonal skills.</p> <p>I did not have enough experience taking exams.</p> <p>Another reason, please specify:</p>	Select all that apply.
20	<p>How would you evaluate your entire educational experience at your institution?</p> <p>Response options: Excellent; Good; Fair; Poor</p>	Select one
21.1	<p>How often did you encounter the following course delivery modes in the 2021-22 school year?</p> <p>Synchronous online/remote: course content was delivered online in real-time at scheduled meeting times.</p> <p>Asynchronous online/remote: course content was delivered online without scheduled meeting times.</p> <p>Hybrid: some portions of a course were in-person and some took place online (e.g., one out of three scheduled classes took place online)</p> <p>“Hyflex” or Flexible: course content was offered at the same time in person and online.</p> <p>In-person: the course content was delivered in-person only.</p> <p>Response options: 0% (Never); 25% (Seldom); 50% (About half of the time); 75% (Usually); 100% (All of the time)</p>	Matrix
	If “0% (never)” for any delivery mode skip corresponding question in 22.2.	
22.2	<p>How would you evaluate your learning experience in each of the following course delivery modes in the 2021-22 school year?</p> <p>Synchronous online/remote: course content was delivered online in real-time at scheduled meeting times.</p> <p>Asynchronous online/remote: course content was delivered online without scheduled meeting times.</p> <p>Hybrid: some portions of a course were in person, and some were online (e.g., one out of three scheduled classes took place online)</p>	Matrix (Select one)

	<p>“Hyflex” or Flexible: course content was offered at the same time in person and online. In person: the course content was delivered in person only. Response options: Excellent; Good; Fair; Poor; Very Poor; Didn’t experience this delivery mode</p>	
23	<p>For your ideal school year, how often would you take courses with the following delivery modes? Synchronous online/remote: course content was delivered online in real-time at scheduled meeting times. Asynchronous online/remote: course content was delivered online without scheduled meeting times. Hybrid: some portions of a course were in-person, and some took place online (e.g., one out of three scheduled classes took place online). “Hyflex” or Flexible: course content was offered concurrently in person and online. In-person: the course content was delivered in-person only. Response options: 0% (Never); 25% (Seldom); 50% (About half of the time); 75% (Often); 100% (All of the time)</p>	Matrix (Select one/)
24	<p>When choosing your courses in the future, how important is the delivery mode? Response options: Not important; Slightly important; Moderately important; Very important; Extremely important</p>	Select one
26	<p>To what extent do you agree or disagree with the following statements? I feel comfortable being myself at this institution. I feel like part of the community at this institution. I am satisfied with my academic experience at this institution. I have performed academically as well as I anticipated I would. Response options: Strongly agree, Agree, Disagree, Strongly disagree</p>	Matrix (select one)
27	<p>During the 2021-22 school year, I was more academically successful in courses when: (Select “not applicable” if you did not encounter a particular feature in your courses). Course materials were accessible in multiple formats (e.g., text, images, videos). The instructor tied the most important points to the larger objectives of the course. Students were allowed to express their comprehension of material in multiple ways (e.g., class participation, assignments, group discussion). The instructor provided instructive feedback on all assignments. The instructor provided course content that was relevant to my lived experiences. The instructor used a variety of teaching methods that promote inclusivity and belonging (e.g., used images that reflect diversity in gender, race and other identities) The instructor was highly approachable and available to students. Multiple options were given to complete an assessment (e.g., my instructor provided a choice between completing a test, presentation, paper, project, etc. for a course assessment). Students were given options to participate in collaborative activities such as group assignments and learning groups.</p>	Matrix (Select one)

	Response options: Strongly agree, agree, Neither agree nor disagree; Disagree; Strongly disagree; Not applicable	
28	<p>Did you encounter challenges to your academic success in your courses in 2021-22? Select all that apply:</p> <p>Staying focused/engaged during classes. Staying on top of my coursework and assignments. Staying motivated. Understanding the content taught by my course instructors. Understanding the expectations for my courses. Accessing the internet and technology. Navigating the online/videoconferencing platforms and resources used in my courses. Participating in my courses from a different time zone Finding a comfortable/quiet place to study Communicating with my instructors or teaching assistants (e.g., to receive feedback and ask about course content, assessments, deadlines, etc.) Communicating with other students from my courses Receiving academic accommodations (e.g., extra time on assessments, assistive technology, alternative formats of materials, etc.) Knowing where to go for help with my courses Other challenge, please specify: _____ I did not encounter any challenges in my courses</p>	Select all that apply
30.1 to 30.11	<p>Did you encounter challenges to your academic success outside your courses? Select all that apply:</p> <p>Making new friends Staying connected with family and friends Maintaining my physical health Maintaining my mental health Accessing physical health and wellness services (e.g., doctor, physiotherapist, massage therapist, gyms, etc.) Accessing mental health and wellness services (e.g., therapist, support group, wellness workshops, etc.) Balancing time for school with other personal responsibilities (e.g., job, volunteering, caregiving, etc.) Dealing with a loss of income in my family household Dealing with an illness in my family household <i>Uncertainty due to the COVID-19 pandemic</i> <i>Distractions due to global affairs</i> Other challenge(s), please specify: _____ I did not encounter any challenges outside my courses</p>	Select all that apply

Appendix B: Additional Tables and Figures

Table 2

Academic Preparedness for PSE by Student Characteristics

This table presents answers to the question, 'Coming out of high school, how prepared were you academically for college/university?'

Category	Fully	Very	Moderately	Slightly	Not at All	Total
Domestic Students	12%	25%	43%	13%	7%	100%
International Students	45%	22%	27%	5%	1%	100%
≤ 20 Years Old	15%	28%	40%	13%	5%	100%
21 to 24 Years Old	20%	17%	48%	7%	8%	100%
≥ 25 Years Old	43%	19%	23%	8%	8%	100%
Students without Disabilities	21%	25%	38%	11%	5%	100%
Students with Disabilities	11%	16%	47%	17%	9%	100%
College Students	24%	20%	39%	9%	7%	100%
University Students	17%	26%	40%	13%	5%	100%
Family Income ≤ 50k	26%	18%	39%	13%	4%	100%
Family Income 50k to 100k	15%	26%	42%	8%	9%	100%
Family Income 100k to 150k	14%	25%	42%	13%	6%	100%
Family Income ≥ 150k	18%	44%	29%	10%	0%	100%
Black	25%	15%	34%	19%	7%	100%
East Asian	14%	29%	45%	9%	4%	100%
Mixed	9%	19%	51%	12%	9%	100%
South Asian	35%	16%	35%	10%	5%	100%
Southeast Asian	5%	31%	38%	19%	9%	100%
White	15%	31%	38%	11%	5%	100%
Other	15%	24%	47%	9%	5%	100%
Women and Another Gender	10%	28%	46%	11%	5%	100%
Men	23%	24%	39%	11%	4%	100%
All Students	19%	24%	40%	12%	6%	100%

n = 999

Table 3

Reasons for Academic Under-Preparedness for PSE by Student Characteristics

This table presents answers to the question and directive, 'In what ways were you not fully prepared academically for college or university? Select all that apply.'

Options	All Students	Domestic	International	College	University	Women and Another Gender	Men	Students Without Disabilities	Students with Disabilities
I did not take enough high school courses relevant to my college/university program.	50%	49%	60%	43%	53%	59%	55%	49%	53%
I did not adequately understand content covered by my relevant high school courses.	36%	35%	36%	39%	34%	29%	34%	38%	27%
My high school courses did not cover content that my college/university instructors expected me to know.	32%	34%	15%	17%	39%	25%	31%	32%	33%
I did not remember content covered by my relevant high school courses.	31%	31%	26%	22%	35%	29%	32%	31%	28%
I lacked math skills.	21%	20%	32%	21%	21%	25%	23%	19%	22%
I lacked English language skills (e.g., writing, reading, speaking).	16%	15%	24%	14%	16%	30%	16%	15%	15%
I lacked time management/organizational skills.	12%	12%	14%	13%	12%	16%	14%	12%	12%
I lacked digital literacy skills (e.g., familiarity with computers, online resources, and videoconferencing software).	11%	7%	39%	15%	9%	6%	14%	11%	12%
I lacked interpersonal skills.	10%	10%	11%	14%	9%	9%	12%	9%	15%
I did not have enough experience taking exams.	10%	8%	20%	15%	7%	12%	11%	10%	7%

n = 999

Table 3, continued

Options	≤ 20 Years Old	21 to 24 Years Old	≥ 25 Years Old	≤ \$50K	\$50K to \$100K	\$100K to \$150K	≥ \$150K	Black	East Asian	Mixed	South Asian	Southeast Asian	White	Other
I did not take enough high school courses relevant to my college/university program.	47%	64%	50%	46%	54%	53%	57%	72%	55%	41%	64%	39%	46%	46%
I did not adequately understand content covered by my relevant high school courses.	38%	26%	35%	34%	34%	42%	26%	25%	20%	31%	44%	34%	41%	31%
My high school courses did not cover content that my college/university instructors expected me to know.	39%	19%	12%	30%	30%	40%	54%	20%	31%	30%	38%	20%	36%	27%
I did not remember content covered by my relevant high school courses.	31%	24%	33%	27%	32%	28%	46%	34%	38%	33%	31%	34%	30%	26%
I lacked math skills.	20%	28%	22%	18%	19%	23%	16%	23%	27%	20%	31%	20%	17%	14%
I lacked English language skills (e.g., writing, reading, speaking).	15%	14%	23%	12%	18%	17%	16%	9%	22%	17%	26%	10%	14%	10%
I lacked time management/organizational skills.	12%	11%	11%	13%	12%	9%	10%	20%	8%	9%	24%	9%	10%	7%
I lacked digital literacy skills (e.g., familiarity with computers, online resources, and videoconferencing software).	10%	11%	28%	17%	11%	5%	6%	6%	17%	12%	13%	8%	7%	22%
I lacked interpersonal skills.	9%	9%	15%	15%	9%	5%	12%	11%	5%	11%	12%	4%	11%	13%
I did not have enough experience taking exams.	7%	11%	29%	12%	11%	4%	2%	10%	8%	12%	18%	9%	6%	13%

n = 999

Table 4

Challenges to Academic Success in the Learning Environment by Student Characteristics

This table presents answers to the question and directive, 'Did you encounter challenges to your academic success in your courses? Select all that apply.'

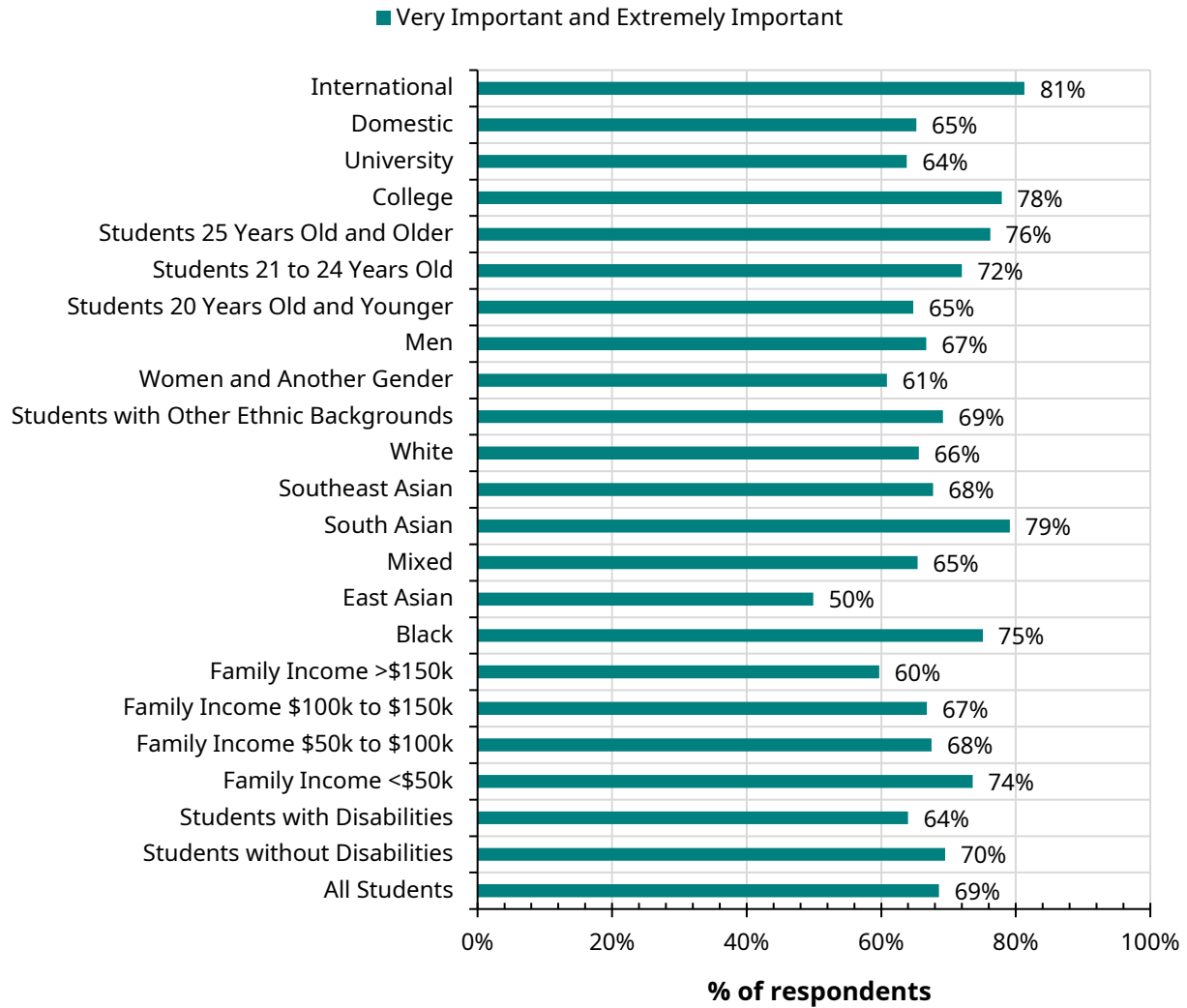
Options	All Students	Domestic	International	College	University	Women and Another Gender	Men	Students with a Disability	Students Without a Disability
Staying motivated	65%	70%	46%	59%	69%	68%	60%	68%	63%
Staying focused/engaged during classes	62%	66%	40%	55%	65%	65%	55%	69%	59%
Staying on top of my coursework and assignments	51%	55%	38%	42%	56%	54%	47%	60%	48%
Communicating with other students from my courses	47%	48%	45%	42%	50%	48%	44%	50%	45%
Understanding the content taught by my course instructors	39%	42%	29%	30%	45%	40%	40%	44%	38%
Communicating with my instructors or teaching assistants (e.g., to receive feedback and ask about course content, assessments, deadlines, etc.)	34%	36%	26%	32%	36%	34%	34%	41%	32%
Knowing where to go for help with my courses	32%	35%	21%	27%	35%	32%	32%	37%	30%
Understanding the expectations for my courses	27%	27%	24%	21%	30%	27%	27%	30%	25%
Finding a comfortable/quiet place to study	26%	27%	20%	28%	25%	28%	22%	33%	23%
Navigating the online/videoconferencing platforms and resources used in my courses	26%	28%	17%	26%	25%	26%	25%	38%	23%
Receiving academic accommodations (e.g., extra time on assessments, assistive technology, alternative formats of materials, etc.)	17%	17%	20%	16%	18%	17%	18%	25%	15%

n = 999

Figure 1

Importance of Delivery Mode During Course Selection by Student Demographics

When choosing your courses, how important is the delivery mode?



Note: This figure displays the proportion of student respondents who selected 'Very Important' or 'Extremely Important' (out of a five-point Likert scale, from 'Extremely Important' to 'Not Important at All') to the question, 'When choosing your courses, how important is delivery mode?' Respondents are presented by student background characteristics.

Table 5

Challenge to Academic Success External to the Learning Environment, by Student Characteristics

This table presents answers to the question and directive, 'Did you encounter challenges to your academic success outside of your courses? Select all that apply.'

Options	All Students	Domestic	International	College	University	Women and Another Gender	Men	Students with a Disability	Students Without a Disability
Maintaining my mental health	57%	63%	35%	48%	62%	75%	47%	72%	52%
Balancing time for school with other personal responsibilities (e.g., job, volunteering, caregiving, etc.)	51%	53%	45%	50%	52%	55%	48%	50%	52%
Uncertainty due to the COVID-19 pandemic	49%	50%	42%	47%	50%	58%	49%	46%	56%
Making new friends	45%	47%	39%	40%	48%	40%	45%	43%	52%
Staying connected with family and friends	38%	40%	31%	32%	42%	31%	38%	36%	43%
Maintaining my physical health	38%	43%	22%	34%	41%	31%	37%	35%	52%
Accessing mental health and wellness services (e.g., therapist, support group, wellness workshops, etc.)	22%	24%	13%	19%	23%	41%	15%	17%	40%
Dealing with a loss of income in my family household	21%	20%	26%	26%	19%	17%	22%	19%	29%
Accessing physical health and wellness services (e.g., doctor, physiotherapist, massage therapist, gyms, etc.)	18%	20%	12%	17%	18%	19%	14%	15%	30%
Distractions due to global affairs	18%	19%	15%	18%	18%	22%	20%	16%	23%
Dealing with an illness in my family household	14%	16%	5%	12%	15%	15%	13%	11%	24%

n = 999

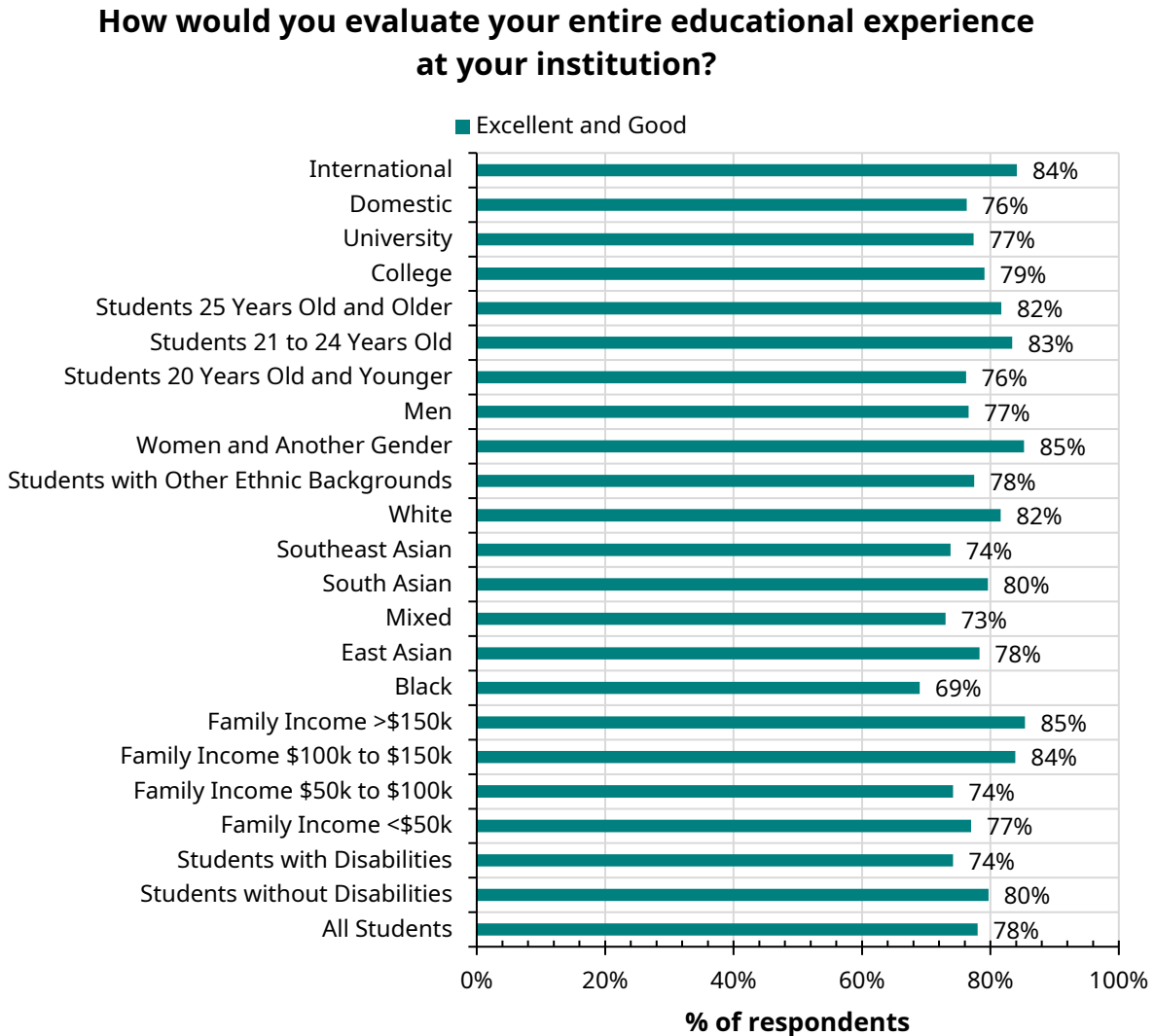
Table 5, continued

Options	≤ 20 Years Old	21 to 24 Years Old	≥ 25 Years Old	≤ \$50K	\$50K to \$100K	\$100K to \$150K	≥ \$150K	Black	East Asian	Mixed	South Asian	Southeast Asian	White	Other
Maintaining my mental health	64%	55%	30%	49%	65%	58%	60%	47%	62%	61%	46%	60%	63%	60%
Balancing time for school with other personal responsibilities (e.g., job, volunteering, caregiving, etc.)	53%	53%	40%	46%	53%	60%	42%	52%	53%	54%	45%	66%	55%	41%
Uncertainty due to the COVID-19 pandemic	50%	48%	40%	49%	46%	51%	48%	45%	54%	38%	43%	60%	52%	50%
Making new friends	46%	41%	34%	44%	43%	47%	47%	52%	53%	43%	44%	53%	43%	39%
Staying connected with family and friends	40%	46%	28%	31%	46%	38%	33%	37%	42%	37%	31%	60%	39%	42%
Maintaining my physical health	41%	34%	29%	38%	43%	35%	42%	37%	53%	44%	31%	37%	38%	42%
Accessing mental health and wellness services (e.g., therapist, support group, wellness workshops, etc.)	24%	19%	13%	22%	25%	22%	14%	21%	24%	22%	16%	27%	23%	26%
Dealing with a loss of income in my family household	18%	25%	33%	35%	20%	12%	6%	34%	12%	22%	21%	34%	14%	32%
Accessing physical health and wellness services (e.g., doctor, physiotherapist, massage therapist, gyms, etc.)	18%	16%	15%	17%	21%	20%	15%	15%	23%	19%	14%	17%	19%	18%
Distractions due to global affairs	17%	24%	18%	18%	17%	16%	14%	12%	18%	21%	17%	18%	18%	22%
Dealing with an illness in my family household	16%	10%	10%	12%	19%	12%	8%	16%	13%	13%	10%	10%	14%	17%

n = 999

Figure 2

Evaluation of Overall Educational Experience by Student Characteristics



Note: This figure shows the proportions of all student respondents who selected 'Excellent' or 'Good' (out of a four-point Likert scale, from 'Excellent' to 'Poor') to the question, 'How would you evaluate your entire educational experience at your institution?' Respondents are presented by student background characteristics.

This table presents the proportion of respondents who selected ‘Strongly Agree’ or ‘Agree’ (out of a four-point Likert scale, from ‘Strongly Agree’ to ‘Strongly Disagree’) in response to the question, ‘To what extent do you agree or disagree with the following statements?’ Respondents are presented by student background characteristics.

Table 6

Satisfaction and Sense of Belonging by Student Characteristics

Options	I feel comfortable being myself at this institution.	I feel like part of the community at this institution.	I am satisfied with my academic experience at this institution.	I have performed academically as well as I anticipated I would.
All Students	89%	72%	81%	74%
Domestic Students	90%	69%	79%	71%
International Students	85%	84%	86%	84%
College	86%	74%	83%	83%
University	91%	71%	79%	69%
Women and Another Gender	92%	78%	86%	74%
Men	89%	72%	80%	75%
Students without Disabilities	91%	76%	82%	77%
Students with Disabilities	83%	59%	79%	62%
Students 20 Years Old and Younger	91%	70%	79%	69%
Students 21 to 24 Years Old	82%	73%	85%	81%
Students 25 Years Old and Older	88%	78%	87%	90%
Family Income <\$50k	86%	72%	78%	76%
Family Income \$50k to \$100k	89%	72%	82%	69%
Family Income \$100k to \$150k	94%	71%	83%	75%
Family Income >\$150k	89%	82%	87%	78%
Black	81%	68%	66%	65%
East Asian	85%	73%	79%	70%
Mixed	85%	64%	79%	74%
South Asian	89%	78%	81%	82%
Southeast Asian	97%	81%	85%	75%
White	94%	69%	86%	75%
Other	86%	76%	76%	66%

n = 999