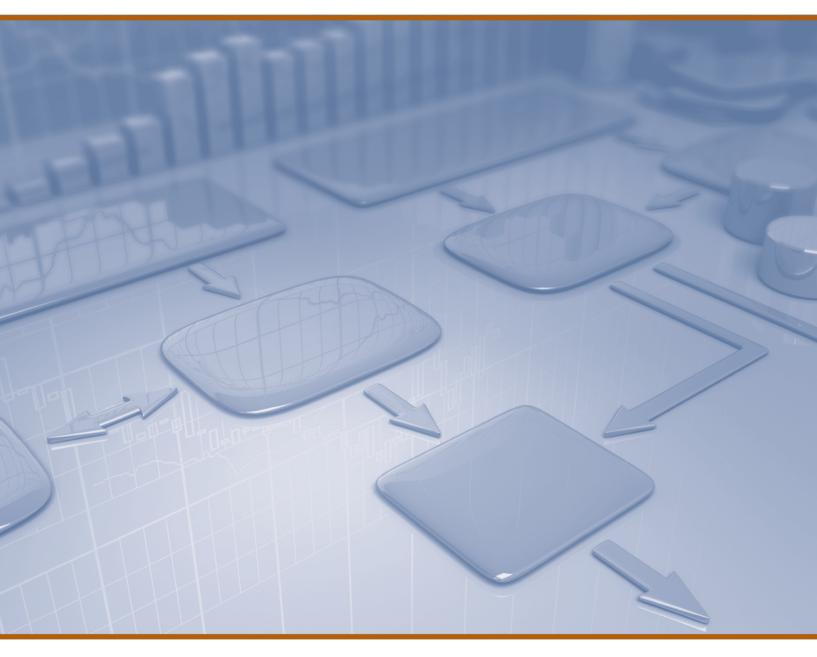


Student Mobility Between Ontario's Colleges and Universities



May 2009

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Executive summary

The movement of students between postsecondary institutions is becoming increasingly common and has created a need for greater emphasis on postsecondary education (PSE) pathways. This report outlines the available data on postsecondary student mobility within Ontario, with a focus on mobility between Ontario's colleges and universities. For comparison, summary data from several other jurisdictions are also presented. Key findings include the following:

University to college

- Seventeen per cent of college students have previous university experience (nine per cent have a university degree)
- Of the university faculties, graduates from the social sciences, humanities and business areas tend to enrol in college programs in the greatest proportions

College to university

• Almost one-quarter of college applicants have identified preparation for university as a major reason for applying to college

- The number of college students/graduates seeking access to Ontario university programs has more than doubled in the last eight years
- While university applicants with college education represented almost 12 per cent of all Canadian applicants to universities, only six per cent actually enrolled
- In Ontario, only nine per cent of college graduates pursue a university education; seven per cent pursue a degree at an Ontario university
- Many other jurisdictions in Canada and the U.S. have higher transfer rates. In British Columbia, for example, 19 per cent of former students of the colleges and institutes pursue a university education.

The percentage of college graduates who proceed to enrol in an Ontario university degree program is low in comparison to several other provinces and U.S. states. Relative to the other jurisdictions surveyed, Ontario has one of the worst transfer rates. The evidence of consistently growing demand from college students and graduates and Ontario's relatively low transfer rate supports the need for new directions in this critical area.

1.0 Introduction

Current research in Canada shows that movement of students between colleges and universities is much more common than in years past. Several recent national studies using data from the Youth in Transition Survey (Statistics Canada) show that it is becoming increasingly common for students to pursue multiple pathways through the postsecondary education system. Students are now more likely to switch programs or institutions before graduating, and to enrol in another postsecondary institution after graduating. Clearly, this is often a premeditated choice, as many students begin their postsecondary education with the intention of pursuing multiple credentials. In light of these trends, the main goal of this report is to outline the available data on issues related to college-university mobility within the province of Ontario. The primary focus is on those individuals who attend both an Ontario public university and an Ontario College of Applied Arts and Technology (CAAT).

Within the Ontario postsecondary sector, there are numerous data sources that address the educational intentions and postsecondary experiences of students. Although these sources were not designed specifically to address mobility between Ontario's public colleges and universities, the data can be used to make inferences regarding this population. Many of these data are available separately for college and university applicants, students and graduates. Thus, the following sections outline the data on educational plans for both college and university, as well as the data on pathways both from university to college and from college to university. Finally, for comparative purposes with that of Ontario, student mobility information for several other selected jurisdictions is presented.

2.0 Plans for further education

Applicants and registrants

The *College Applicant Survey* (Academica Group Inc.) is an online survey administered through the Ontario College Application Service (OCAS) to a large, random sample of college applicants. These data can then be matched with

registration information to isolate the group of applicants who went on to register at a college. In 2007, respondents were asked to rate a series of items as to whether they were reasons for applying to college. As seen in Table 1, "preparation for university" was rated as a major reason by almost 25 per cent of both applicants and registrants.

Table 1

Reasons for applying to college: Applicants and registrants

	Preparation for university			
	Major reason	Minor reason		
Applicants	24%	27%		
Registrants	24%	28%		

Sources: Academica Group Inc.; OCAS

This applicant survey was modified for 2008, such that applicants now indicate a single main reason for applying to college. Of the 2008 Ontario college applicants, nine per cent reported that their main reason for applying to college was "to prepare for further university studies." In a separate question, almost one-third of applicants reported that their "ultimate academic credential" was a degree; 18 per cent of applicants intended to pursue a university bachelor's degree and an additional 12 per cent intended to pursue a professional or graduate degree.

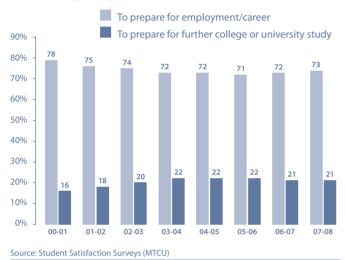
The parallel survey for Ontario university applicants was last conducted in 2005. The 2005 University Applicant Survey (Academica Group Inc.; Canada Millennium Scholarship Foundation) was administered to a large, random sample of applicants who applied through the Ontario University Application Centre (OUAC). Although assessment of previous education was not a focus of the survey, a significant proportion of applicants were clearly moving from college to university; 11 per cent of these university applicants were either current or former college students at the time of application.

College students

Further evidence regarding educational intentions is available for college students through the *Student Satisfaction Survey* (MTCU). This is an annual in-class survey administered to all college students beyond first semester. In 2007-08, 21 per cent of college students indicated that their main goal in enrolling in college was "to prepare for further college or university study." This percentage has been relatively stable over the last five years, after increasing significantly from 16 per cent of students in 2000-01 (Figure 1).

Figure 1

'Main goal' of Ontario college students in enrolling in their college programs



As expected, these percentages vary substantially depending on the college credential being pursued. For example, students pursuing one-year certificates were much more likely to report the main goal of preparing for further study (42 per cent), as compared to those enrolled in post-diploma (graduate) programs (eight per cent). Of course, even within any particular credential, these percentages also vary according to the type of program. Certain college certificates and diplomas are preparatory educational programs while others are more directly career oriented; the potential goals of students would be expected to vary accordingly. To illustrate the range, Table 2 shows the response to the 'main goal' question for a selection of high-enrolment programs at the one-year certificate and two-year diploma levels.

Table 2

"Main goal" for enrolling by specific college programs

Program	"to prepare for further college or university study"
Business - Accounting (2-yr)	31%
Early Childhood Education	44%
General Arts & Science (1-yr)	77%
General Arts & Science (2-yr)	79%
Pre-Health	86%
Practical Nursing	16%

Source: 2007-08 Student Satisfaction Survey (MTCU)

College Graduates

The *Graduate Satisfaction Survey* (MTCU) is administered to college graduates six months after graduation and includes numerous questions on further education. For the 2006-07 graduates, the survey shows that of those graduates who continued their education within six months, most made this decision either prior to or during their college programs (Table 3).

Table 3

College graduates who further their education: Timing of the decision

	Before the college program	At the start of the program	During the program	After the program
College-bound	44%	6%	32%	18%
University-bound	41%	6%	42%	11%

Source: 2006-07 Graduate Satisfaction Survey (MTCU)

Overall patterns are generally similar between those who pursue additional college or university studies, although university-bound graduates are most likely to make their decision during their college program (42 per cent). As mentioned above, certain college programs are specifically designed to prepare students for further study, so these percentages would also be expected to significantly differ across programs. For example, 79 per cent of graduates of Pre-Health programs and 63 per cent of graduates of General Arts and Science programs had made the decision to further their education before starting those programs. Insights into the reasons for pursuing further education can also be gathered from the *Graduate Satisfaction Survey* (MTCU). As shown in Table 4, whether they pursue additional college or university studies, college graduates tend to have similar reasons for doing so. Interest in more in-depth training, gaining more theoretical knowledge, and more opportunities for career advancement were most likely to be cited as reasons for pursuing further education.

Table 4

College graduates: Reasons for pursing further education

	College	bound	Universit	ty bound
	Major reason	Minor reason	Major reason	Minor reason
Potential for higher income	61.5%	21.3%	71.6%	20.2%
No work/job available in your field of study	19.2%	25.6%	13.6%	26.9%
To get diploma/certificate/ degree	71.7%	18.2%	87.3%	9.5%
Interest in further/more in-depth training in field	74.3%	17.1%	71.9%	19.6%
Interest in a different field of study	36.5%	29.9%	29.2%	32.2%
Need for professional designation	49.4%	25.9%	55.4%	23.4%
Gain theoretical knowledge/ broader education	71.0%	22.7%	70.0%	24.2%
Encouragement from others (family members, friends, faculty)	29.2%	40.0%	33.3%	42.3%
More opportunities for career advancement	83.9%	11.1%	90.0%	7.6%
Upgrade/improve skills	76.1%	17.5%	71.7%	21.9%
Transfer agreement existed between the programs	29.7%	24.2%	43.8%	21.1%
Company required/paid for it	7.8%	13.9%	5.3%	14.5%

Source: 2006-07 Graduate Satisfaction Survey (MTCU)

Table 5

College applicants with documentation of university experience*

		2000	2001	2002	2003	2004	2005	2006	2007
Applicants	#	7,980	7,746	7,762	8,985	9,474	9,857	12,210	18,230
	%	6.2%	5.9%	5.5%	6.1%	6.7%	7.2%	8.9%	12.6%
Registrants	#	4,249	4,073	4,102	4,681	4,879	5,144	6,212	9,627
	%	5.8%	5.4%	5.0%	5.7%	5.6%	6.2%	7.4%	10.8%

*Copies of a university degree or transcript were voluntarily supplied. Source: OCAS fall data

3.0 University to college

Applicants

The most recent data gathered by OCAS through the college application process indicate that 13 per cent of applicants and 11 per cent of first-year registrants had previous university experience (Table 5). Of particular interest is the fact that the numbers of these applicants and registrants have more than doubled since the 2000-01 academic year.

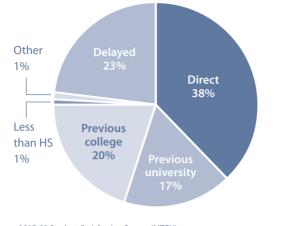
It should be noted that in the most recent application cycles, electronic transmission of educational documents has made it easier for applicants to submit their records if they choose to do so. Also note that these percentages include only individuals who voluntarily provided copies of a university degree or transcript as part of their application. Other applicants may not have needed or wanted to disclose this information and thus, it seems likely that these values underestimate the numbers of college applicants and registrants with previous university experience.

Students

The *Student Satisfaction Survey* (MTCU) includes a question addressing the previous education of college students. As shown in Figure 2, more than one-third of current college students have previous postsecondary experience.

Figure 2

Pathways to college: Direct entrants, delayed entrants and those with previous postsecondary experience.

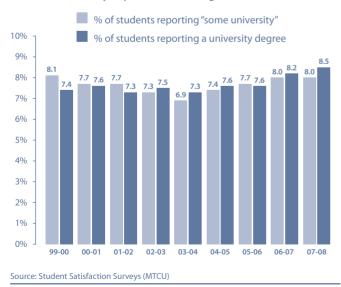


Source: 2007-08 Student Satisfaction Survey (MTCU)

Survey answers can be parsed both by type of previous education and whether or not a credential was completed. Figure 3 shows the data specifically for previous university experience of college students since the 1999-00 academic year. As expected, the percentages declined slightly in the years surrounding the double cohort, as relatively larger numbers of students entered directly from high school. Since that time, the percentages have shown slight increases such that as of 2007-08, approximately 17 per cent of college students had previous university experience; 8.5 per cent had completed a university degree.

Figure 3

Previous university experience of college students



Graduates

The Council of Ontario Universities (COU) supports a follow-up survey of university graduates, conducted two years after graduation. The most recent survey addressed the 2005 Ontario university graduates and included guestions on additional education pursued since university graduation. Graduates were asked if they had been attending school six months after graduation and also if they were currently attending school two years after graduation. A follow-up guestion specified the type of school, with "community college" as one of the options. Table 6 shows that of the 2005 university graduates in further education six months after graduation, 11.5 per cent attended a college; after two years, 9.4 per cent of the graduates in further education were currently attending a college. Of the university faculties, students in the social sciences, humanities and business areas tend to enrol in college programs in the greatest proportions.

Table 6

University graduates attending college six months and two years after graduation

All graduates						
	Six months after graduation	Two years after graduation				
Were you attending school?	35.6%	28.3%				
If yes, were you enrolled in acommunity college?	11.5%	9.4%				
Si	ocial sciences					
	Six months after graduation	Two years after graduation				
Were you attending school?	42.5%	32.6%				
If yes, were you enrolled in acommunity college?	15.1%	11.2%				
	Humanities					
	Six months after graduation	Two years after graduation				
Were you attending school?	47.1 %	30.0%				
If yes, were you enrolled in acommunity college?	14.8%	9.7%				
Busine	ess and commerce					
	Six months after graduation	Two years after graduation				
Were you attending school?	22.8 %	21.0%				
If yes, were you enrolled in acommunity college?	12.2%	9.1%				

Source: Ontario University Graduate Survey (Council of Ontario Universities, 2008)

4.0 College to university

Applicants

As part of the OUAC application to Ontario universities, applicants are asked to indicate any previous college attendance, including the type of college and duration of attendance (attainment of a college credential is not addressed). As shown in Figure 4, the number of applicants with previous CAAT experience has increased substantially since the late 1990s, particularly in the last several years. A large majority of these applicants have attended college for more than one year.

The increase in the numbers of applicants with previous CAAT experience has outpaced that of the general increase seen in the numbers of Ontario university applicants (see Appendix 1). For the last few years, applicants with previous CAAT experience have accounted for more than 10 per cent of total applicants to Ontario universities (Figure 5). Although the numbers of these applicants who go on to register at an Ontario university has not risen as sharply, individuals with CAAT experience account for approximately six per cent of total registrants.

Figure 4



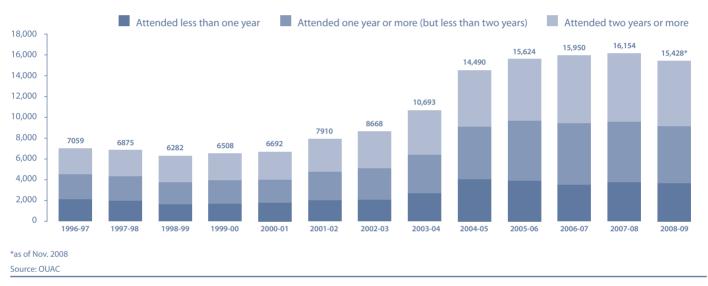
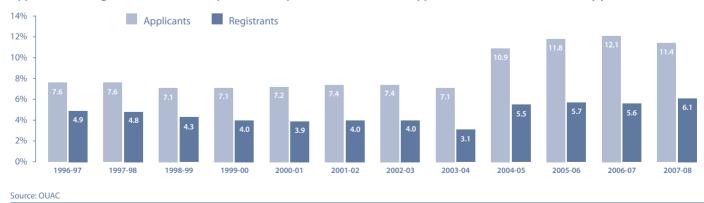


Figure 5

Applicants and registrants with CAAT experience as a per cent of all Canadian applicants to Ontario universities by year

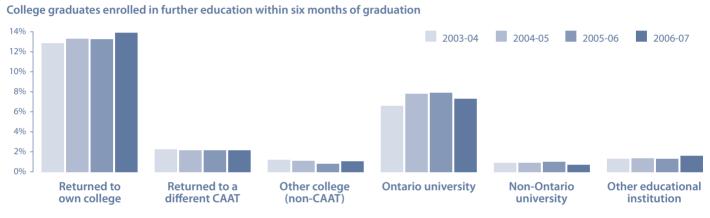


Graduates

Considerable data on the further education of college students are available through the Graduate Satisfaction Survey (MTCU). The most recent data show that 27 per cent of the 2006-07 college graduates were continuing their education within six months of graduation (see Appendix 2). The characteristics of college graduates who continue their education in another college are beyond the scope of this report, as the primary focus is on college-university mobility. Although the largest proportion of college graduates returned to their college of graduation, the next largest proportion enrolled in an Ontario university (Figure 6). This indicates that in any given year, a substantial number of Ontario university students have enrolled directly from college. For example, given that there were 60,406 college graduates in 2006-07, this indicates that approximately 4,400 graduates were enrolled in an Ontario university within six months of graduation. Of course, additional graduates may decide to continue their education more than six months after graduation.

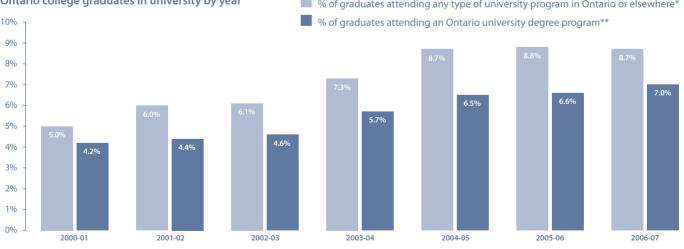
As shown in Figure 7, the percentage of graduates who further their education at a university has been more than eight per cent for the last several years. As evident in the figure, a change was introduced in the graduate survey such

Figure 6



Note: graduates of collaborative nursing programs are not included in this survey Source: Graduate Satisfaction Surveys (MTCU)

Figure 7



Ontario college graduates in university by year

% of graduates attending any type of university program in Ontario or elsewhere*

* Data include those graduates who went on to register for collaborative degree programs, either through the college or university. Survey questions were recently changed to distinguish collaborative degrees.

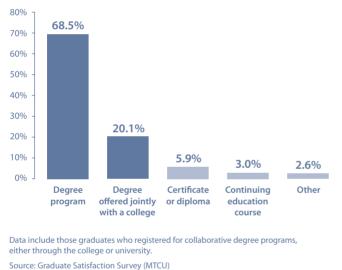
**5.5 per cent were attending an Ontario university degree program and 1.5 per cent were attending an Ontario collaborative degree program. Source: Graduate Satisfaction Surveys (MTCU)

that 2006-07 graduates can be further subdivided according to those who enrolled in a college-university collaborative program. The number of college-university collaborative programs has been increasing in the last few years, so this change will now allow a mechanism to track the numbers of college graduates who are attracted to such programs.

It is also possible to look more specifically at the type of university credential being pursued by college graduates. Of those graduates attending a university within six months, the vast majority enrolled in a degree program. More than two-thirds of these graduates are pursuing a university degree, while an additional 20 per cent are enrolled in college-university collaborative degree programs (Figure 8).

Figure 8

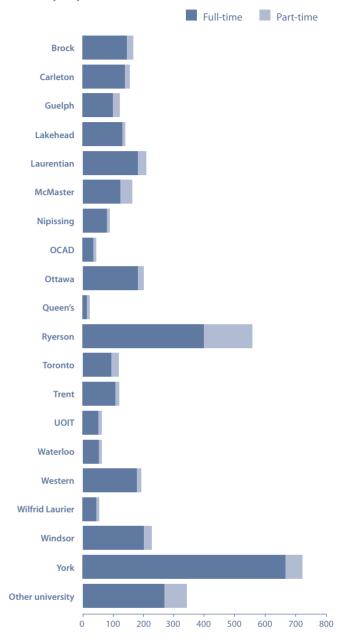
Per cent of 2006-07 college graduates in university by program type



As part of the survey, graduates also provide the name of the Ontario university which they are currently attending and their full-time versus part-time status. These data are displayed in Figure 9. Note that data are presented as survey responses; the average survey response rate for graduates is 75 per cent.

Figure 9

Number of 2006-07 graduate survey respondents attending university*, by institution



* Survey response rate = 75 per cent. Data include those graduates who registered for collaborative degree programs, either through the college or university. Source: Graduate Satisfaction Surveys (MTCU) There is some variability from year to year, so Table 7 shows the universities in which recent CAAT graduates have enrolled for full- and part-time studies since 2004-05. Over time, the largest numbers of recent graduates have tended to enrol in York University and Ryerson University for full-time studies. Universities outside of Ontario also draw significant numbers of college graduates. Part-time university enrolment is generally quite low in comparison with full-time enrolment, but again, a large proportion of college graduates enrol at Ryerson University.

Table 7

Numbers of graduate survey respondents attending university by year

	Full-time			Part-time		
	04-05	05-06	06-07	04-05	05-06	06-07
Brock	202	197	145	19	19	19
Carleton	246	226	136	32	24	17
Guelph	84	109	96	10	17	25
Lakehead	108	146	128	4	5	8
Laurentian	178	175	180	20	19	30
McMaster	98	107	122	29	33	40
Nipissing	97	87	80	4	2	2
OCAD		11	36		6	5
Ottawa	183	141	179	33	29	19
Queen's	26	27	15	7	3	6
Ryerson	364	384	398	170	179	161
Toronto	102	112	93	22	24	23
Trent	135	123	107	4	12	12
UOIT	44	40	51	10	16	9
Waterloo	37	53	54	6	8	7
Western	160	200	177	18	15	14
Wilfrid Laurier	85	62	45	3	6	5
Windsor	177	167	202	22	24	24
York	643	631	669	67	71	55
Other univ	336	362	267	55	65	75
Total	3305	3360	3180	535	577	556

* Survey response rate = 75 per cent. Graduates of collaborative nursing programs are not included in this survey. 2006-07 data include those graduates who went on to register for collaborative degree programs, either through the college or university. Source: Graduate Satisfaction Surveys (MTCU)

The percentage of college graduates who enrol in the Ontario universities can be compared with the overall relative percentages of students enrolled in each of these institutions (Table 8). Given the size of their undergraduate enrolments, Brock University, Carleton University, and the University of Western Ontario enrol a proportionate number of college graduates. In contrast, a disproportionately high number of graduates enrol at Ryerson University and York University for full-time study, and a disproportionately low number enrol at the University of Toronto.

Table 8

Enrolment share of Ontario undergraduates by institution; all undergraduates vs. college graduates (six months after graduation)*

	Full-	time	Part	time
	% of Ont. university under- graduate enrolment	% of college graduates	% of Ont. university under- graduate enrolment	% of college graduates
Brock	4.3	5.0	5.5	4.0
Carleton	5.4	4.7	5.8	3.5
Guelph	5.9	3.3	4.0	5.2
Lakehead	1.9	4.4	2.6	1.7
Laurentian	1.9	6.2	4.2	6.2
McMaster	6.3	4.2	5.8	8.3
Nipissing	1.2	2.7	2.0	0.4
OCAD	0.9	1.2	1.8	1.0
Ottawa	8.1	6.1	7.2	4.0
Queen's	4.4	0.5	3.2	1.2
Ryerson	5.3	13.7	15.7	33.5
Toronto	16.7	3.2	11.0	4.8
Trent	2.0	3.7	2.6	2.5
UOIT	1.6	1.8	0.4	1.9
Waterloo	7.3	1.9	2.6	1.5
Western	6.6	6.1	3.2	2.9
Wilfrid Laurier	3.9	1.5	3.2	1.0
Windsor	3.8	6.9	5.5	5.0
York	12.6	23.0	13.9	11.4

* University data are total undergraduate enrolment for fall 2007 available as of November 2008. College graduate data are for graduates of the 2006-07 academic cycle. Data include those graduates who registered for collaborative degree programs, either through the college or university.

Sources: CUDO; MTCU

As expected, graduates of certain college programs are more likely than others to further their education in university. For example, of the 2006-07 college graduates in university within six months of college graduation, 10 per cent came from Early Childhood Education programs. In fact, eight programs can account for almost half of the recent college graduates in university (Table 9). Of course, differences in program sizes affect these percentages, so it is also useful to look within programs to examine the proportion of those graduates who go on to university. As an example, 18 per cent of Early Childhood Education graduates enrol in university within six months of graduation. In comparison, two-year General Arts and Science programs have a relatively higher university enrolment rate, at 30 per cent.

Table 9

College program origins for 2006-07 college graduates in university

College program origin	% of total college graduates in university	% of total graduates from that program in university
Early Childhood Education	10%	18%
General Arts and Science (1-yr)	7%	20%
Police Foundations	6%	15%
General Arts and Science (2-yr)	6%	30%
Pre-Health	6%	21%
Social Service Worker	5%	18%
Business Administration (3-yr)	5%	19%
Business Administration - Accounting (3-yr)	4%	21%
Child and Youth Worker	2%	13%
Business Administration - Marketing (3-yr)	2%	15%
Practical Nursing	2%	5%
Mechanical Engineering Technology	2%	15%
Business - Accounting (2-yr)	2%	8%
Law and Security Administration	2%	11%
Business Administration - Human Resources (3-yr)	1%	15%
Bridge to University Nursing	1%	72%

* Includes graduates who registered at a university (any program, Ontario or elsewhere) as well as those who registered for collaborative degree programs, either through the college or university.

Source: Graduate Satisfaction Survey (MTCU)

For many of these graduates, the university program destinations can also be identified. Of the 2006-07 graduates, 20 per cent were enrolled in a program categorized as Commerce/Business/Administration. Programs in the humanities and social sciences also received significant percentages of recent college graduates. In general, however, the list of university program destinations is quite broad; the top 15 programs by percentage are shown in Table 10.

Table 10

University program destinations for 2006-07 college graduates in university

Program area*	% of graduates in university
Commerce/Business/Administration	20%
Nursing	6%
Psychology	6%
Sociology	5%
Social Work	5%
Criminology	4%
Social Sciences	4%
Law	3%
Pre-School Training	3%
General Arts	2%
Computer Science	2%
General Arts and Science	2%
English Language/Literature	2%
Mechanical Engineering	2%
Other Communication Studies	2%
Kinesiology	1%

* Includes only those graduates who provided a university program area and registered through the university. Students who registered for a collaborative degree through the college are excluded; in particular, this results in an under-representation of the percentage of graduates in nursing.

Source: Graduate Satisfaction Survey (MTCU)

5.0 Other jurisdictions

In order to provide Canadian context for the data on student mobility in Ontario, a brief overview of available data at the national and provincial levels is provided in the following sections. A final section also outlines some recent findings from the U.S. Transfer rates from different jurisdictions differ in the calculation method employed and, thus, are not easily comparable to those of Ontario. For example, transfer rates are typically reported for the postsecondary institutions within a limited jurisdiction. In order to facilitate comparison, Table 11 shows the CAAT graduates from preparatory programs (i.e., General Arts and Science; Pre-Health) versus career programs who continue their education specifically at an Ontario university within six months of graduation. These data can allow for approximate comparisons with those of the other areas.

Table 11

Representative college-university transfer rates within Ontario

College program	% of graduates enrolled in an Ontario university*
General Arts and Science, 2-yr	25.4%
General Arts and Science, 1-yr	19.0%
Pre-Health	21.0%
Career programs**	7.2%

* Includes graduates who enrolled in any university degree program (including collaborative degrees) in Ontario only, within six months of their college graduation.

** Career programs category excludes graduates from all preparatory programs, post-diploma (graduate) programs and applied and collaborative degrees.

Source: 2006-07 Graduate Satisfaction Survey (MTCU)

Alberta

The Alberta Council on Admissions and Transfers regularly publishes information on student mobility in Alberta. These data include transfers among and between both public and private institutions. Many of the colleges in Alberta have specific university-transfer programs which differ significantly from the Ontario college system. Thus, the following data focus on the two technical institutes (Northern Alberta Institute of Technology, NAIT; Southern Alberta Institute of Technology, SAIT), as their programs tend to be careeroriented and are reasonably comparable to those of Ontario:

 In a graduate survey of the class of 2003-04 (conducted in 2006, approximately two years after graduation), 40.5 per cent of technical institute graduates reported that they had previous postsecondary education (PSE) experience prior to their program of graduation. University graduates were the most likely to report having previous PSE experience (56.4 per cent)

 In the same survey, 20.5 per cent of 2003-04 graduates from the technical institutes were currently continuing their education (two years after graduation). Of these graduates, 36.1 per cent were currently pursuing an undergraduate degree and 4.5 per cent were pursuing a graduate degree.

Source: Alberta Council on Admissions and Transfers (2006)

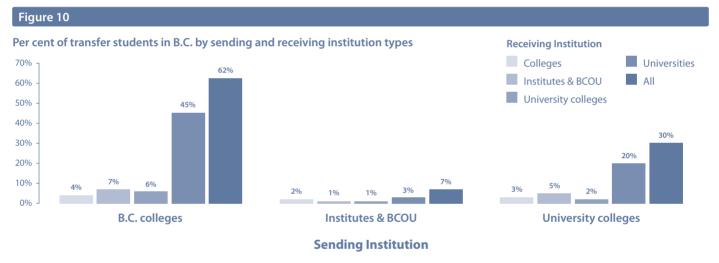
British Columbia

The B.C. College and Institute Student Outcomes Survey is administered annually to former students of British Columbia postsecondary institutions, approximately nine to 20 months after they left the institutions. In one of the questions, survey respondents indicated whether that had postsecondary experience prior to their program. Across all British Columbia colleges and institutes, 48 per cent of these former students indicated they had postsecondary experience prior to their program. The survey also tracks the educational destinations of British Columbia transfer students by asking those respondents who have gone on to further studies to name the new British Columbia institution. Based on these data provided for the 2007 outcomes survey, British Columbia has an overall college-university transfer rate of 19 per cent. For further detail, the results are shown by major program category; 34 per cent of former students of applied programs, and 81 per cent of former students of Arts and Science programs have taken further study since leaving. Of those who pursued further study, 26 per cent from applied programs, and 65 per cent from Arts and Science programs, chose a university. These data are collapsed across all British Columbia colleges and institutes, and include as "transfer students" those who have either graduated or completed a significant portion of their programs.

Specific details regarding the destinations of transfer students in British Columbia are available for the previous cohort of students. Figure 10 shows the per cent of transfer students in British Columbia by sending and receiving institution type. Of students who transferred between public institutions in British Columbia, 62 per cent came from colleges, 30 per cent from university-colleges and seven per cent from institutes or the British Columbia Open University (BCOU). Of those who transferred to a British Columbia university, 45 per cent came from British Columbia colleges, 20 per cent from university-colleges and three per cent from institutes or BCOU.

Quebec

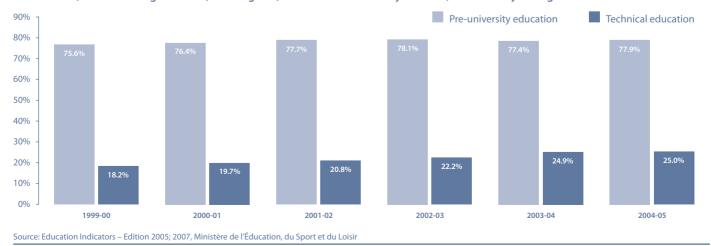
The Quebec postsecondary education system is unique in Canada. In this system, secondary school graduates enrol at a Collège d'enseignement général et professionnel (CEGEP) or a private subsidized college. Some short technical programs are available, but most of these students pursue either a two-year pre-university program or a three-year technical program, both of which lead to a Diploma of College Studies (DCS). Graduates of the pre-university program can then enrol in university, while graduates of the technical program typically enter the labour force, although they may also enrol in university under certain conditions. While the uniqueness of the pre-university programs in Quebec limit the comparative value of the transfer data, the transfer rate for graduates of the career programs is worthy of consideration. The government of Quebec regularly publishes information on the number of DCS graduates under age 25 who enrol full time in university immediately after graduation. As expected, the majority of pre-university program graduates enrol in university. The latest available data are for the class of 2004-05 and show that 77.9 per cent of pre-university program graduates were enrolled in university, a percentage which has remained relatively stable over the past few years. In contrast, 25 per cent of technical DCS graduates were also enrolled in university and this percentage has risen substantially from 18.2 per cent for the class of 1999-00 (Figure 11). This increase is believed to be related to the increase in the number of credit recognition agreements between Quebec colleges and universities.



Source: B.C. Stats (2006; 2008)

Figure 11

Per cent of Quebec CEGEP graduates (under age 25) who enrol in university full time, immediately after graduation



Saskatchewan

Saskatchewan Advanced Education and Employment commissioned an outcomes study of Saskatchewan's 2004-05 postsecondary graduates (two years after graduation). This included data on graduates from the two universities, several institutes and numerous colleges across the province. As the Saskatchewan Institute of Applied Science and Technology (SIAST) most closely resembles the Ontario colleges, those data are described here:

- Two years after graduation, 24.6 per cent of SIAST graduates were enrolled in a postsecondary program leading to a certificate, diploma or degree (general interest or non-credit courses were excluded). Of these SIAST graduates who pursued further education, 21.1 per cent enrolled at a Saskatchewan university
- There were 5.1 per cent of SIAST graduates enrolled in the University of Saskatchewan or the University of Regina, two years after graduation
- When asked about previous PSE credentials (prior to their program of graduation), 18.9 per cent of SIAST graduates reported having previously completed a certificate, 8.2 per cent a diploma and 4.5 per cent a degree. Of the Saskatchewan university graduates, 8.1 per cent had previously completed a certificate, while 8.7 per cent had previously completed a diploma.

Source: Saskatchewan Advanced Education and Employment (2007)

National data

Recently, a Canadian version of the National Survey of Student Engagement (NSSE) has been developed. In 2008, numerous Canadian universities participated in this survey, including all the Ontario universities. As part of the survey, first-year and senior-year university students were asked to indicate the types of schools they had attended since high school. In total, approximately nine per cent of first-year and 15 per cent of senior-year Ontario students indicated that they had attended a college prior to university (Table 12). As indicated in the table, several types of national sample groupings are available for comparison. In general, percentages of Ontario university students with previous college experience are lower than those of Canadian universities with primarily undergraduate enrolments. The comparison with universities categorized as comprehensive/medical/ doctoral is more complex; Ontario senior-year students are less likely to have university transfer courses, but more likely to have vocational/technical courses.

U.S. data

Several U.S. national sources and numerous states publish some outcome information on community college transfer students. As with the other Canadian provinces, differing definitions and methodologies make direct comparisons with Ontario colleges difficult. However, examples of reasonably comparable data are available. For example,

Table 12

Previous college experience of university students

		First-year stude	ents	Senior-year students						
Previous education*	Ontario	Canada	Canada	Ontario	Canada	Canada				
		Primarily undergrad	Comprehensive/ medical/doctoral		Primarily undergrad	Comprehensive/ medical/doctoral				
Community college (vocational/technical courses not at university level)	5%	9%	4%	8%	10%	5%				
Community college (university credit /transfer courses)	4%	6%	4%	7%	10%	10%				
CEGEP	1%	1%	12%	2%	1%	12%				

*Survey respondents are presented with all previous education options

Primarily undergraduate university sample = Brock, Lakehead, Malaspina (Vancouver Island), Thompson Rivers, Trent, University of Prince Edward Island, Wilfrid Laurier Comprehensive/medical/doctoral university sample = McGill, Concordia, McMaster, Toronto, Alberta, Calgary, York

Source: NSSE 2008 (Canadian Background Item Frequency Distributions); available through the universities' websites.

under the direction of the U.S. National Center for Educational Statistics, a national longitudinal survey was initiated in 2004 to track information on postsecondary outcome measures. One of these measures is the transfer rate from two-year programs at U.S. community colleges. The latest results were released in 2008, and show that of the students who began a community college program in 2004, 18 per cent had transferred to another postsecondary institution within three years. An additional 16 per cent had completed their credential within this time frame; any further education of this latter group was not assessed.

Source: U.S. Dept. of Education, National Center for Educational Statistics, 2003-04 beginning postsecondary students longitudinal study, first follow-up (2008)

In California, data on community college students are published regularly by the California Postsecondary Education Commission. California community colleges enrol almost one-guarter of all community college students in the U.S. Community college transfer students account for approximately two-thirds of degree graduates from California State University and one-third of degree graduates from the University of California. The most recent data on transfer rates show significant differences depending on the method of calculation. For example, 24 per cent of community college students categorized as "degree-seeking" succeeded in transferring (18 per cent) or graduating from community college (six per cent) within six years of beginning the program. Similarly, 26 per cent of students who were "transfer-focused" in their first-year (i.e., a majority of first-year courses were transfer eligible) eventually transferred to a four-year institution. Six-year transfer rates are much higher if stricter definitions of transfer students are used. For example, the transfer rate is as high as 69 per cent if transfer students are defined as those students under age 20 who are "transfer-ready" (i.e., those who have completed enough courses to be eligible to transfer).

Source: California Postsecondary Education Commission (2006); Shulock & Moore (2007); Sengupta & Jepsen (2006); Horn & Lew (2007)

In the last several years, a six-state consortium of community colleges has been established to improve measures of student outcomes. This group includes information on those who transfer from a community college either with or without attaining a college credential. In 2008, the most recent six-year transfer rates for each of these states were made available; the transfer rates for those who graduated from college are presented in Table 13. Of those students who completed an associate's degree (typically two years in duration), 22 to 69 per cent went on to attend a four-year institution, depending on the state.

Table 13

Transfer rates: Community colleges to four-year institutions (full- and part-time community college students)

State	% of graduates who subsequently transfer to a four-year institution									
	Certificates	Associate degrees								
Connecticut	13	43								
Florida	10	69								
North Carolina	5	34								
Ohio	7	22								
Texas	6	50								
Virginia	11	52								

Source: Jobs for the Future/Achieving the Dream Policy Brief (2008)

6.0 Conclusion

The data presented in this report clearly support a high level of interest in the pursuit of multiple PSE pathways within Ontario. Independent data sources from the college and university sectors indicate that significant numbers of Ontario students have experience with both college and university. These data complement recent publications from Statistics Canada which have emphasized the increasingly common nature of postsecondary student mobility. Table 14 summarizes the major points presented in this report.

Table 14

Summary table

Student interest	Almost one-quarter of college applicants have identified preparation for university as a major reason for enrolling in college.
Student demand	The number of college students/graduates seeking access to Ontario university programs has more than doubled in the last eight years.
Institutional responses	While university applicants with college education represented almost 12 per cent of all Canadian applicants to universities, only six per cent actually enrolled.
Inter-jurisdictional comparisons	In Ontario, nine per cent of college graduates pursue a university education and only seven per cent of college graduates pursue a degree at an Ontario university. Many other jurisdictions in Canada and the U.S. have higher transfer rates. In British Columbia, for example, 19 per cent of former students of the colleges and institutes pursue a university education.

As shown in the preceding sections, and summarized in the table above, convergent evidence from applicant, student and graduate sources highlight the importance of strong PSE pathways within Ontario. Historical data from both application centres display positive trends in the numbers of college and university applicants with previous PSE experience, and Ontario applicant and student surveys indicate that many individuals have clear intentions to pursue multiple credentials. The most recent Ontario graduate surveys also show that significant percentages of college and university graduates move between the sectors within six months of graduation.

Relative to several other Canadian provinces and U.S. states, however, Ontario's transfer rate is low. The evidence of student intentions, increasing graduate demand and the transfer rates in other jurisdictions all support the need for new directions in this critical area.

Appendices

Appendix 1

Numbers of Ontario university applicants and registrants by year

		96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08
Applicants	with previous CAAT attendance	7,059	6,875	6,282	6,508	6,692	7,910	8,668	10,693	14,490	15,624	15,950	16,154
	total applicants - Ontario	81,966	79,898	78,366	80,404	82,049	94,712	104,809	139,051	119,969	119,430	119,753	128,319
	total applicants - Canada	93,283	90,118	88,681	91,534	93,475	107,040	116,673	150,760	133,049	132,041	132,015	141,473
Registrants	with previous CAAT attendance	2,542	2,408	2,229	2,109	2,046	2,513	2,782	2,746	4,263	4,479	4,194	5,110
	total applicants - Ontario	48,347	47,447	47,856	49,048	48,129	58,919	66,003	85,142	73,051	74,092	71,335	79,197
	total applicants - Canada	51,473	50,378	51,332	52,612	51,800	63,149	70,127	88,733	77,591	78,617	75,541	83,266

Source: OUAC

Appendix 2a

Number of 2006-07 surveyed graduates in further education* by institution

	Returned to own college	Returned to a different CAAT	Other college (non-CAAT)	Ontario university	Non-Ontario university	Other educational institution	Total in further education**
ALGO	455	38	20	184	21	49	771
BORE	87	5	1	13	3	5	115
CAMB	426	34	10	75	3	12	561
CANA	86	28	12	91	4	22	243
CENT	203	27	13	233	5	32	517
CONF	142	10	5	50	2	11	220
CONS	188	21	16	81	7	14	327
DURH	165	32	14	82	14	21	330
FANS	644	88	41	186	24	43	1027
GEOR	198	50	13	100	19	37	419
GRBR	498	81	26	247	9	42	908
HUMB	418	54	25	356	25	68	954
LACI	92	10	19	86	41	19	267
LAMB	98	30	12	35	1	11	187
LOYT	211	25	13	30	2	14	295
MOHA	244	23	18	170	15	35	507
NIAG	193	42	24	119	13	23	417
NORT	71	17	6	12	0	5	111
SAUL	85	15	13	7	15	32	167
SENE	334	65	30	428	22	47	930
SHER	414	116	51	296	20	50	955
SLAW	151	38	15	54	16	25	299
SSFL	193	38	18	106	8	29	392
STCL	394	18	23	104	8	25	574
TOTAL	5990	905	438	3145	297	671	11493

*Six months after graduation. Survey response rate = 75 per cent. **Note: Totals include 47 graduates who indicated they were in further education, but did not provide the new institution. Collaborative nursing graduates are not included in any further education data. Graduates pursuing collaborative degrees are grouped with the college or university with which they registered.

Appendix 2b

	Returned to own college	Returned to a different CAAT	Other college (non-CAAT)	Ontario university	Non-Ontario university	Other educational institution	Total in further education
ALGO	14.1	1.2	0.6	5.7	0.6	1.5	23.8
BORE	21.1	1.2	0.2	3.2	0.7	1.2	27.9
CAMB	32.8	2.6	0.8	5.8	0.2	0.9	43.2
CANA	10.7	3.5	1.5	11.3	0.5	2.7	30.3
CENT	9.3	1.2	0.6	10.7	0.2	1.5	23.6
CONF	18.0	1.3	0.6	6.3	0.3	1.4	27.8
CONS	12.2	1.4	1.0	5.2	0.5	0.9	21.2
DURH	10.9	2.1	0.9	5.4	0.9	1.4	21.8
FANS	18.9	2.6	1.2	5.5	0.7	1.3	30.2
GEOR	12.2	3.1	0.8	6.1	1.2	2.3	25.7
GRBR	13.7	2.2	0.7	6.8	0.2	1.2	25.0
HUMB	10.6	1.4	0.6	9.0	0.6	1.7	24.1
LACI	10.0	1.1	2.1	9.3	4.5	2.1	29.0
LAMB	15.6	4.8	1.9	5.6	0.2	1.8	29.8
LOYT	24.5	2.9	1.5	3.5	0.2	1.6	34.3
MOHA	11.0	1.0	0.8	7.7	0.7	1.6	22.8
NIAG	11.9	2.6	1.5	7.4	0.8	1.4	25.8
NORT	18.7	4.5	1.6	3.2	0.0	1.3	29.3
SAUL	16.4	2.9	2.5	1.4	2.9	6.2	32.2
SENE	8.7	1.7	0.8	11.2	0.6	1.2	24.3
SHER	12.4	3.5	1.5	8.8	0.6	1.5	28.5
SLAW	12.2	3.1	1.2	4.4	1.3	2.0	24.2
SSFL	12.5	2.5	1.2	6.9	0.5	1.9	25.5
STCL	24.7	1.1	1.4	6.5	0.5	1.6	35.9
TOTAL	13.9	2.1	1.0	7.3	0.7	1.6	26.7

*Six months after graduation. Per cent totals for each college include all graduates who responded to Q01 (Q01=1 or Q01=2 or Q01=3).

Appendix 3a

Number of surveyed graduates attending university full time*

		Brock	Carleton	Guelph	Lakehead	Laurentian	McMaster	Ottawa	Queen's	Ryerson	Toronto	Trent	Waterloo	Western	Wilfrid Laurier	Windsor	York	Nipissing	UOIT	OCAD	Outside Ontario	TOTAL
	ALGO	0	82	0	4	1	2	62	1	1	0	0	0	0	0	0	2	3	1	0	15	174
	BORE	0	0	0	0	12	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	16
	САМВ	0	1	0	5	54	0	1	1	0	0	1	0	1	0	1	0	0	0	0	2	67
	CANA	3	4	0	3	8	1	1	0	0	0	1	2	0	0	0	1	61	0	0	4	89
	CENT	2	0	7	5	1	0	0	0	89	13	2	1	4	0	3	64	0	2	5	4	202
	CONF	0	0	0	46	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	48
	CONS	4	0	2	0	0	6	1	0	2	0	0	23	0	8	22	1	1	0	0	7	77
	DURH	2	1	0	2	0	0	1	0	8	4	11	0	2	0	1	5	0	27	4	11	79
	FANS	11	4	4	6	3	4	3	0	5	0	0	3	114	0	7	4	1	0	0	19	188
rom	GEOR	0	0	2	6	29	5	1	0	6	1	0	0	3	1	3	22	7	1	2	17	106
College Graduated From	GRBR	3	1	4	3	4	5	0	0	77	20	2	1	1	1	2	69	0	2	9	8	212
duat	HUMB	7	3	27	13	2	7	5	0	48	12	3	4	6	1	4	137	1	3	2	19	304
Gra	LACI	0	2	0	0	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	32	110
llege	LAMB	1	1	1	1	0	1	1	0	0	0	0	0	13	0	16	0	0	0	0	1	36
ප	LOYT	1	3	0	2	2	0	2	0	0	0	9	0	1	0	0	2	0	1	0	0	23
	MOHA	21	3	5	6	3	52	1	0	7	4	0	4	3	25	0	7	0	1	0	10	152
	NIAG	55	3	6	5	1	6	0	0	8	0	0	0	2	3	2	3	1	4	0	9	108
	NORT	0	0	0	3	6	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	11
	SAUL	1	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	14	20
	SENE	1	6	7	5	1	0	4	1	73	14	4	2	5	0	6	223	0	4	4	13	373
	SHER	13	2	21	4	2	21	4	1	42	22	2	6	4	3	9	85	1	1	8	15	266
	SLAW	1	15	1	1	2	0	7	10	1	0	3	09	1	0	1	2	0	1	1	11	58
	SSFL	4	3	0	4	0	2	1	1	2	2	60	5	2	2	1	3	2	2	0	7	103
	STCL	0	0	1	0	0	0	0	0	1	0	0	0	2	0	78	0	0	0	0	5	87
	TOTAL	130	134	88	124	135	113	171	15	371	92	99	52	165	44	156	630	78	50	35	227	2909

*Six months after graduation. Graduates pursuing collaborative degrees, who registered through the college partner, are not represented in this table. Survey response rate = 75 per cent.

Number of surveyed graduates attending university part time*

		Brock	Carleton	Guelph	Lakehead	Laurentian	McMaster	Ottawa	Queen's	Ryerson	Toronto	Trent	Waterloo	Western	Wilfrid Laurier	Windsor	York	Nipissing	UOIT	OCAD	Outside Ontario	TOTAL
	ALGO	0	12	0	2	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	6	31
	BORE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	САМВ	0	0	0	0	9	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	11
	CANA	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	6
	CENT	0	0	0	0	0	1	0	0	19	5	0	0	0	0	0	8	0	2	0	1	36
	CONF	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	CONS	0	0	0	0	2	2	0	0	2	0	0	1	0	1	3	0	0	0	0	0	11
	DURH	0	0	0	0	0	2	0	0	0	1	5	0	0	0	0	0	0	6	0	3	17
	FANS	1	0	0	0	1	2	0	0	0	1	0	0	12	0	0	0	0	0	0	5	22
mor	GEOR	0	0	1	0	4	0	0	0	2	0	0	3	0	0	0	1	0	0	0	2	13
College Graduated From	GRBR	1	0	1	0	1	1	1	0	26	5	0	0	0	0	0	6	0	0	1	1	44
duat	нимв	2	1	19	0	1	6	0	1	26	3	0	0	0	0	0	12	0	0	0	6	77
Gra	LACI	0	1	0	0	0	0	6	0	1	0	0	0	0	0	0	0	0	0	0	9	17
llege	LAMB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	LOYT	0	1	1	0	0	0	0	3	1	0	0	1	0	0	0	0	0	0	0	2	9
	МОНА	2	0	0	0	0	15	0	0	5	0	0	2	0	3	0	1	0	0	0	5	33
	NIAG	11	0	0	1	0	1	0	0	4	1	0	0	0	0	0	0	0	0	2	4	24
	NORT	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	SAUL	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	SENE	0	0	1	0	1	1	0	0	40	1	1	0	0	0	0	22	0	0	1	9	77
	SHER	0	0	1	0	0	9	0	0	25	4	0	0	0	1	1	3	0	0	1	5	50
	SLAW	1	1	0	0	1	0	0	1	2	0	0	0	1	0	0	0	0	0	0	5	12
	SSFL	0	1	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	1	0	1	11
	STCL	0	0	0	0	0	0	0	0	2	0	0	0	0	0	20	0	0	0	0	3	25
	TOTAL	19	17	25	7	24	40	17	6	156	21	12	7	14	5	24	53	2	9	5	70	533

*Six months after graduation. Graduates pursuing collaborative degrees, who registered through the college partner, are not represented in this table. Survey response rate = 75 per cent.



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