

Mobility of International Students in Ontario Colleges

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Executive Summary

Since 2009, the Ontario College system has experienced a dramatic growth in international students dramatically exceeding that of ministry-funded students at the system level; 246.0% and 11.4% respectively. Despite this growth, international students at Ontario colleges have not been the subject of studies especially as they compare to the domestic student population. Enrolment continues to grow unabated, yet colleges are struggling to understand the demographic characteristics of international students, aside from their country of origin, let alone their outcomes post-graduation.

Utilizing two provincially mandated surveys, Student Satisfaction and Graduate Satisfaction, this report answers two questions:

1. How do international and domestic students differ in Ontario colleges?
2. How does college-to-university transfer differ for international and domestic students in Ontario?

Part One includes is an analysis of the demographic characteristics of age, gender, and first language learned along with the academic characteristics of previous education, program of choice, and related skill development. Then, because of the large percentage of international students entering college with previous university, the same analysis is conducted for this sub-group. Based on the Student Satisfaction survey from 2011 to 2014 international students are older, male and are most likely to be enrolled in business. International students are significantly more likely to come with a university degree and compared to their domestic counterpart are likely to enroll in graduate certificates, are younger, and are seeking support for writing and speaking skills.

Part Two examines transfer's various components including the rate, timing of decision, sources of information, destination program and satisfaction with the experience. Based on the Graduate Satisfaction Survey from 2007 to 2015 the transfer rates for international graduates are lower than that of their peers and are declining over time. International graduates are more likely to make their decision about transfer after completing their program; report getting more transfer information from the college; and have higher levels of satisfaction with their transfer experience and academic preparation.

The growth of international students at Ontario Colleges of Applied Arts and Technology is an important trend to both individual colleges and the system. Because international students are rapidly becoming a singularly large portion of the college population, with different characteristics than their domestic peers, policy makers need to be receptive and responsive to their needs. With half of international students having completed a university degree the extent to which this reality affects pedagogy needs to be examined further. The transfer rate is dropping which suggests international students are primarily using college as a second credential and not as an automatic stepping stone to university. Finally, those students who are transferring to university are more likely to use college resources for information about transfer which should prompt institutions to examine their services in this area.

Introduction

International students have become an important part of post-secondary education in Canada. The number of international students has risen 84% between 2003 and 2013, and most precipitously since Canada introduced the Canadian Experience Class as part of its new immigration policy changes.¹ Another report published by the Higher Education Quality Council of Ontario (Williams, K., Williams, G., Arbuckle, A., Walton, Roberts, M., & Hennebry, J., 2015)² describes the political and economic climate, as well as the policy changes in that climate over time. The political climate for international students has changed dramatically, and more recently, the policy environment has adapted to increase the number of international students admitted into Canada's post-secondary institutions. These changes include streamlining application processes and revising policies regulating off-campus work and post-graduation work permits. Students from India and China have recently had greater ease in accessing Canadian post-secondary education with policy changes, though financial restrictions have become a potential barrier to access.³ With these changes, according to the Williams et. al. (2015), Ontario has become the primary destination for international students in Canada. "Ontario-bound international students show a growing tendency to study in the college sector, with over 50% of new entrants attending a college in 2012" (Williams et al., 2015).

Despite this growth, international students at Ontario colleges have not been the subject of studies especially as they compare to the domestic student population. Enrolment continues to grow unabated, yet colleges are struggling to understand the demographic characteristics of international students, aside from their country of origin, let alone their outcomes post-graduation. This report is an attempt to capture this data utilizing two provincial surveys in an attempt to ignite future research.⁴

International Student Growth in Ontario Colleges

Since 2009, the Ontario College system has experienced a dramatic growth in international students. The range of growth for individual colleges varies from 110% to 3,246%, with an individual enrolment count in 2015 from 24 students to 5,365 students. International student growth far exceeds that of ministry-funded students at the system level; 246.0% and 11.4% respectively. In a closer examination of individual colleges, international students are compensating for a decline in domestic students and has allowed for the continual growth in student enrolment.

¹ See CBIE report: <http://monitor.icef.com/2015/02/canada-introduces-new-process-international-students-hoping-immigrate/>

² Williams, K., Williams, G., Arbuckle, A., Walton-Roberts, M., & Hennebry, J. (2015). *International Students in Ontario's Postsecondary Education System, 2000-2012: An evaluation of changing policies, populations and labour market entry processes*. Toronto: Higher Education Quality Council of Ontario.

³ See report on international students: <http://www.heqco.ca/en-ca/Research/ResPub/Pages/International-Students-in-Ontario%E2%80%99s-Postsecondary-Education-System-2000-2012.aspx>

⁴ The report benefitted from some earlier work of Julien Declaire for a previous CBIE report; and it is supported by Matthew Duncan's production design and graph development.

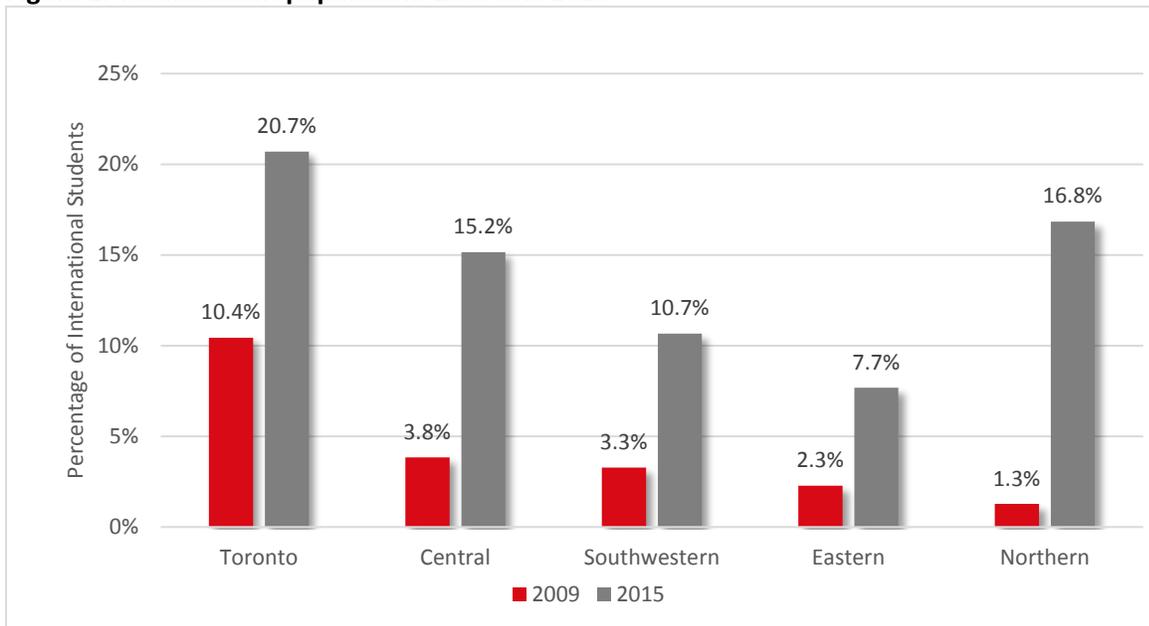
Table 1. Full Time Enrollment in Ontario Colleges, 2009 & 2015

REGION	Domestic			International		
	2009	2015	GROWTH	2009	2015	GROWTH
Toronto	54,098	62,485	15.5%	6,303	16,303	158.7%
Central	43,134	49,021	13.6%	1,720	8,753	408.9%
Southwestern	28,497	31,377	10.1%	968	3,746	287.0%
Eastern	29,946	32,805	9.5%	696	2,730	292.2%
Northern	13,472	12,749	-5.4%	174	2,583	1384.5%

Source: Ontario College Application Service

The growth of international students is apparent in all regions across the province with the Northern Region increasing its international student enrolment by 1,384.5%, and Toronto colleges increasing by 158.7%. Toronto colleges have grown by 10,000 international students since 2009, almost four times the international student enrolment of Northern colleges in 2015. The number of international students at the four Toronto colleges is almost half (47.8%) of the total international student population in all 24 Ontario Colleges of Applied Arts and Technology.

International students also represent an increasing proportion of the total full-time student population. The chart below shows the percentage of international students as a proportion of the total full-time student population in 2009 and in 2015 for each region. The Northern region exhibits the highest growth in proportion, with 1.3% in 2009 and 16.8% in 2015; the Toronto colleges continue to lead the system with 20.7% of its full-time student population consisting of international students.

Figure 1. Total student population: 2009 and 2015

Source: Ontario College Application Service

Note "total" student population includes international students and those funded under the Ontario Government's General Purpose Operating Grant (GPOG).

Slow growth or declining domestic students, decreased funding,⁵ provincial government encouragement and the potential for increased revenue have all combined to make the recruitment of international students a priority. Indeed, all of the reasons combined suggests Ontario colleges are becoming more dependent on international student enrolment.

Research Questions

- How do international and domestic students differ in Ontario colleges?
 - For those with a university credential**, how do outcomes differ?
- How does college-to-university transfer differ for international and domestic students in Ontario?

Data Sources

Two distinct provincial datasets, the provincially mandated Student Satisfaction Survey (SSS) and the Graduate Student Survey (GSS), are used to understand key differences between international and domestic students. The SSS helps quantify characteristics, while the GSS allows for an examination of transfer to further education, including choice of institution destination and reasons for continuing their education.

⁵ see http://collegesontario.org/policy-positions/budget-submissions/CO%202016%20Budget%20WEB_2.pdf

Student Satisfaction Survey

The Student Satisfaction Survey is an annual paper-based survey administered to students in all programs enrolled in the second semester and higher, across Ontario.⁶ Administered in the classroom, the survey asks questions relating to teaching, the program, college services, and engagement while collecting self-reported socio-demographic information. The survey captures approximately 65% of students enrolled in the Ontario College system. Since 2011, the survey has asked respondents to self-identify as international students, enabling researchers to distinguish them from domestic students.

Samples of Study

Table 2. Ontario Student Satisfaction Survey, 2011-2014

	Total	Domestic	International
Total Non-unique Observations in SSS (2011-2014)	539,656	-	-
First Year Survey Respondents Only	275,327	-	-
Observations with Valid International/ Domestic Status	269,389	242,299	27,090

Graduate Satisfaction Survey

The Graduate Satisfaction Survey is administered to all college graduates with an Ontario College Credential from a publically funded College of Applied Arts and Technology (CAAT) in Ontario.⁷ It is administered approximately six months after graduation through telephone surveys conducted by an external service provider to whom the colleges provide contact information and graduate characteristics such as age, gender, and program of study. The MTCU uses the results to gauge the performance of colleges on three of the five Key Performance Indicators (KPIs) – graduate satisfaction rate, employment rate, and employer satisfaction rate – each of which are tied to a modest sum of performance funding and are made public. Additionally, the survey asks the student if they went on to further education. The survey has an average response rate of 67% over the study period and asks the same core questions for each year of the study. Graduates who indicate they are working full or part time are asked several employment-related questions. Full time students are not asked any labour market questions.

⁶ For a look at the 2015-2016 survey handbook, see: <https://www.tcu.gov.on.ca/pepg/documents/KPIStudentSatisfactionandEngagementSurvey.pdf>

⁷ See the Ministry of Training, Colleges and Universities (2009). Framework for Programs of Instruction.

Table 3. Ontario Graduate Satisfaction Survey, 2007-2014

	Total	Domestic	International
Total Number of Graduates (2007-2015)	694,379	622,115	72,264
Survey Respondents (64%)	444,451	410,141	34,310
Students who Transferred to University	30,683	29,529	1,154

Results

How do Domestic and International Students Differ?

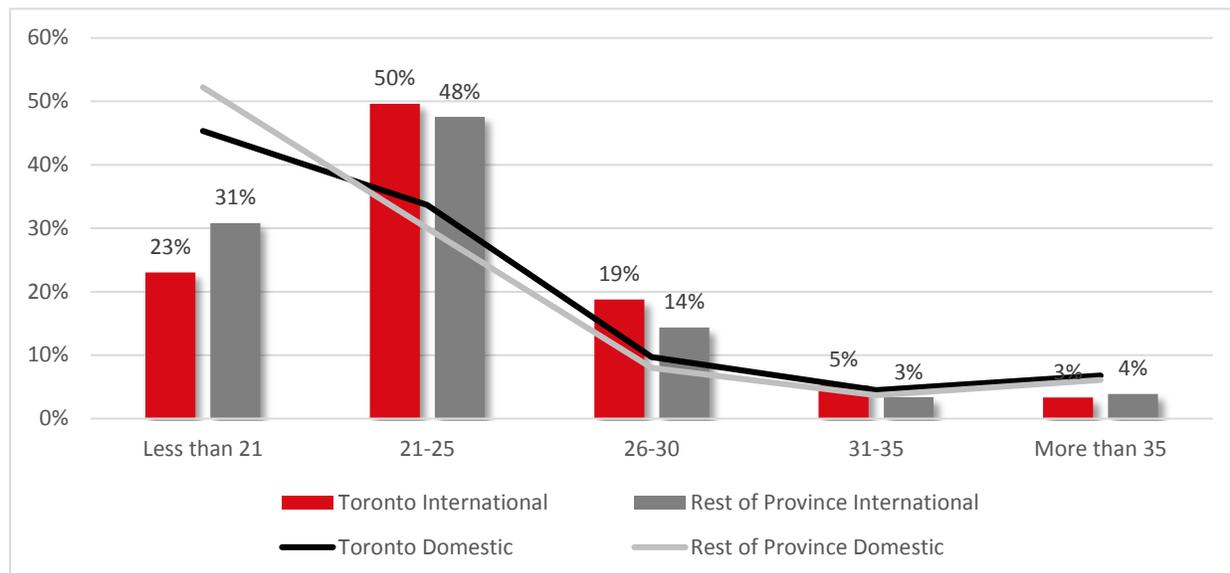
When it comes to international students in Ontario, “Toronto dominates” (Williams et al., 2015). While the growth in international students has grown at a faster rate in the rest of the province, Toronto colleges still represent almost half of the total international student population, compared with only one-third of ministry-funded enrolment. The Toronto colleges also represent a different domestic student dynamic each with a significant second language population fueled by new Canadians. Toronto colleges arguably represent a different environment for the international student, possibly reflected in some of the dimensions uncovered in the data presented here. Toronto colleges are represented by Centennial, George Brown, Humber and Seneca; the rest of the province consists of the remaining 20 including the two French speaking colleges, Boreal and La Cite. For purposes of all of the demographic characteristic comparisons, the discussion will distinguish between Toronto and the Rest of Ontario.

Demographic Characteristics

Age

International students are older than the domestic student overall with more in the 21- 25 and 26-30 age categories than domestic for both Toronto colleges and the Rest of Ontario. As with domestic students, Toronto international students are older than their Ontario counterpart.

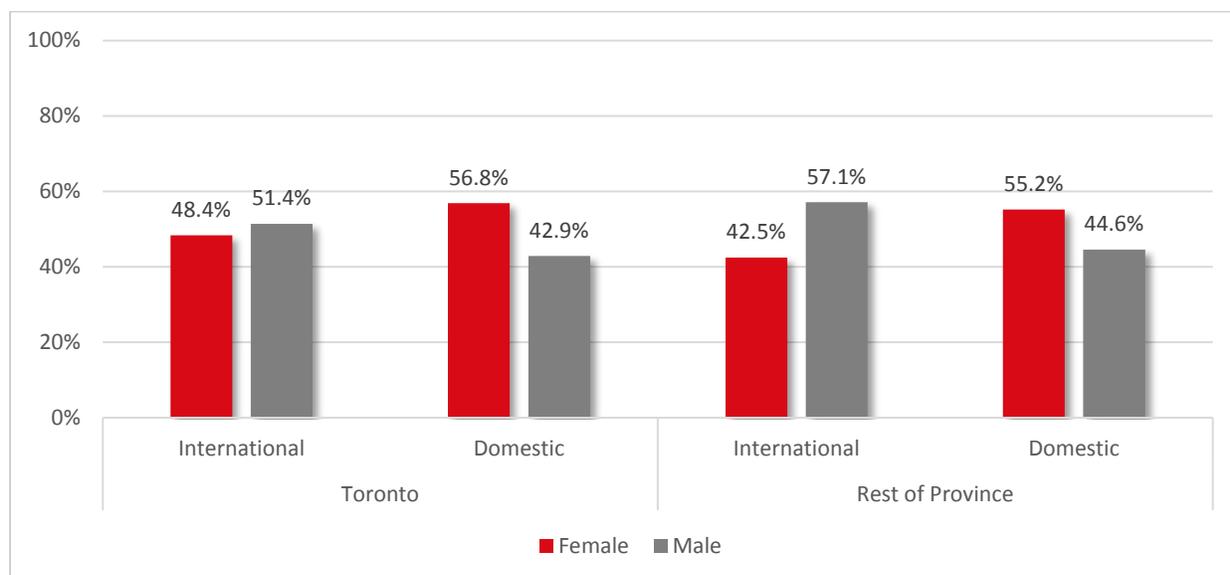
Figure 2. Age categories comparing Domestic and International, Toronto and Rest of Province, 2011 – 2014.



Gender

International students are more likely to be male compared to their domestic counterparts. This difference is especially outside of Toronto in which case, the gender pattern is almost the mirror opposite for domestic students. The extent to which the gender enrolment pattern is a function of programs of choice is explored further later in this report.

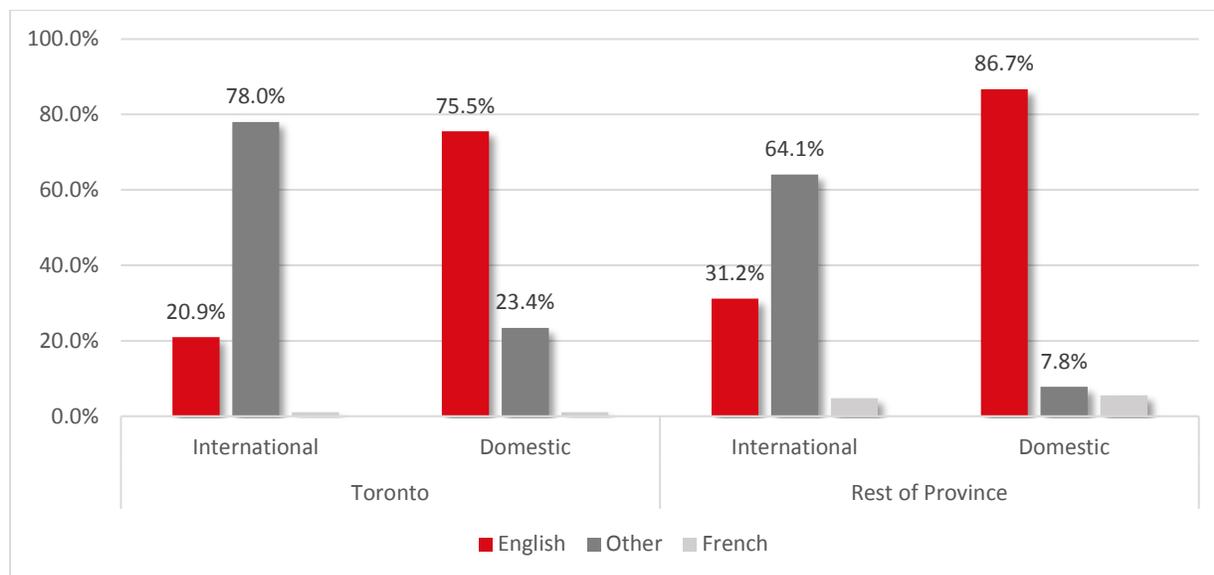
Figure 3. Gender comparing Domestic and International, Toronto and Rest of Province, 2011 – 2014.



First Language

Not surprisingly, the survey reports considerable difference in first language between international students and domestic students. Of note is the considerable difference between Toronto and the Rest of Ontario in the number of domestic students who identify “Other” as their first language. With almost a quarter of domestic students identifying “Other” as their first language, there exists the possibility that international students could feel more “at home” in the Toronto colleges.

Figure 4. First language learned comparing Domestic and International, Toronto and Rest of Province, 2011 – 2014.



Equally surprising is the number of international students in the Rest of the Province who responded with English as their first language, at almost one-third (31.2%). The survey does not help us identify the countries, but this result does suggest different countries of origin for international students who enroll in colleges outside of the city of Toronto. The number of domestic students in the rest of the province whose first language is English is also higher than in Toronto colleges; consequently, the gap between reported first languages is approximately the same.

Previous Education

The student satisfaction survey asks to list the highest credentials earned prior to enrolling in their program. Figure 5 shows the highest reported earned credential of international and domestic student respondents. The difference is dramatic. For the years 2011 to 2014, 43.5% of international students entered colleges across the province having already earned a university degree, compared to only 11.4% of domestic students. The student satisfaction survey reports on the percentage of its students with previous education without distinguishing between international and domestic students. These numbers show how the international students can inflate the figures.

Figure 5. Education completed before entering this program, Domestic and International, 2011 – 2014.

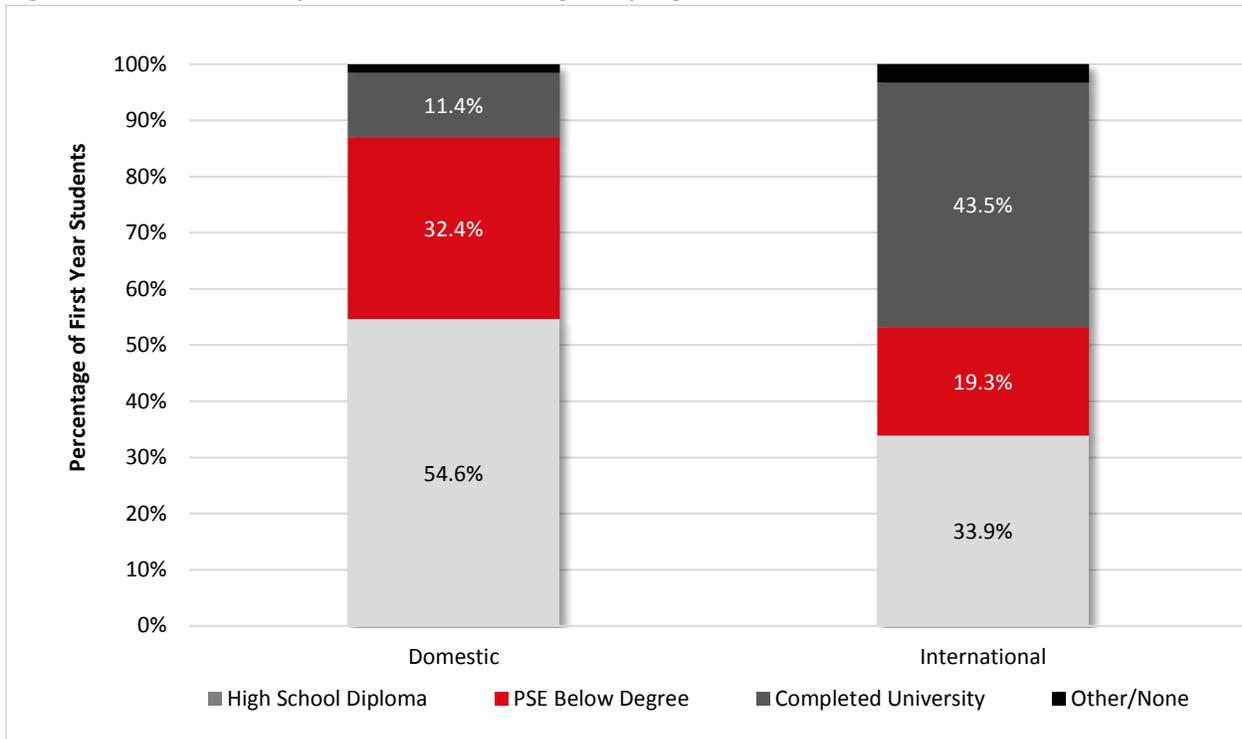


Figure 6 shows the percentage of domestic and international student entrants with a completed university degree in each of the four years of this report. The percentage of entering international students holding a university degree has been demonstrably higher than their domestic counterparts; and for both there has been an increase since 2011.

The completion of a previous credential has an impact on the academic aspirations of students after graduation. Figures 7 and 8 compare post-college goals of domestic and international students for those with a completed university degree and those without, respectively. There is minimal difference between domestic and international students who have completed a degree with international students responding with less than 2 percentage point more likely to say their goal was to prepare for further studies. Remarkably, there is no difference when those without a degree: domestic and international students entered their program with the goal of preparing for further studies at an approximate rate of 22% in the 2014 reporting year.

Figure 6. Total number of students entering college with a completed degree, 2011 – 2014.

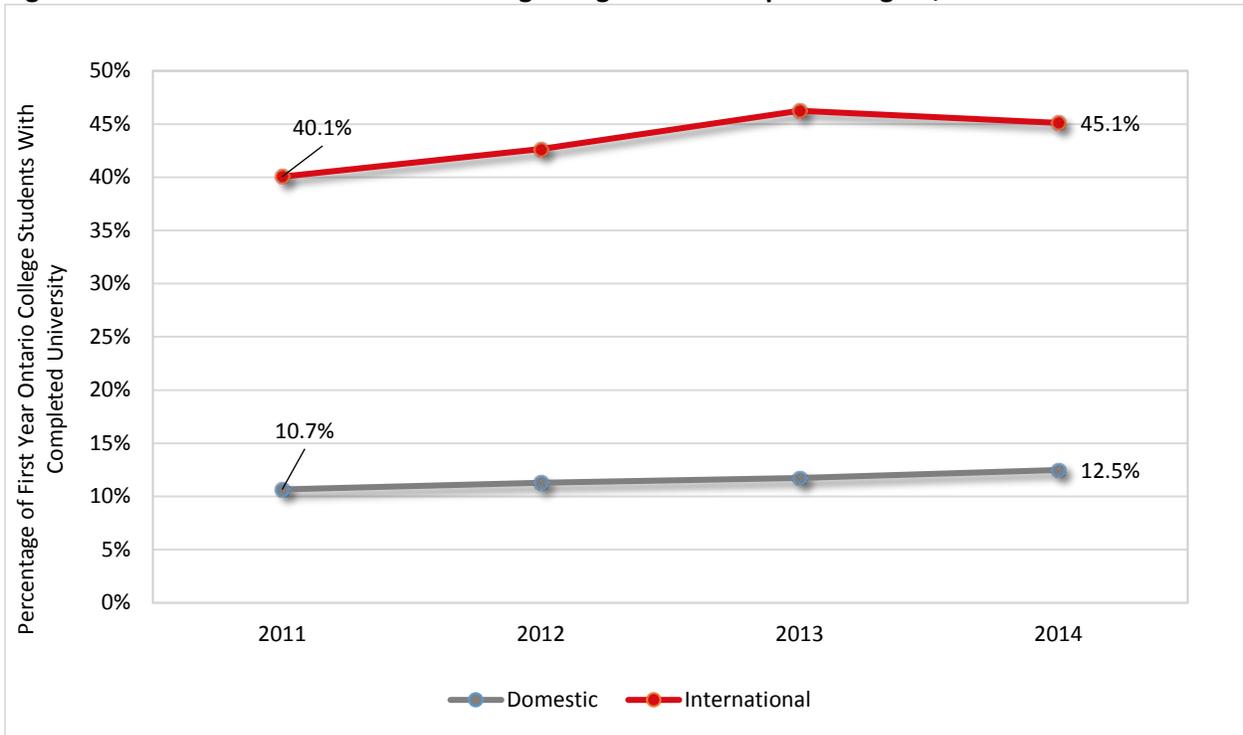


Figure 7. Students who indicate 'prepare for further studies' as a goal, those who have completed university, 2011 – 2014.

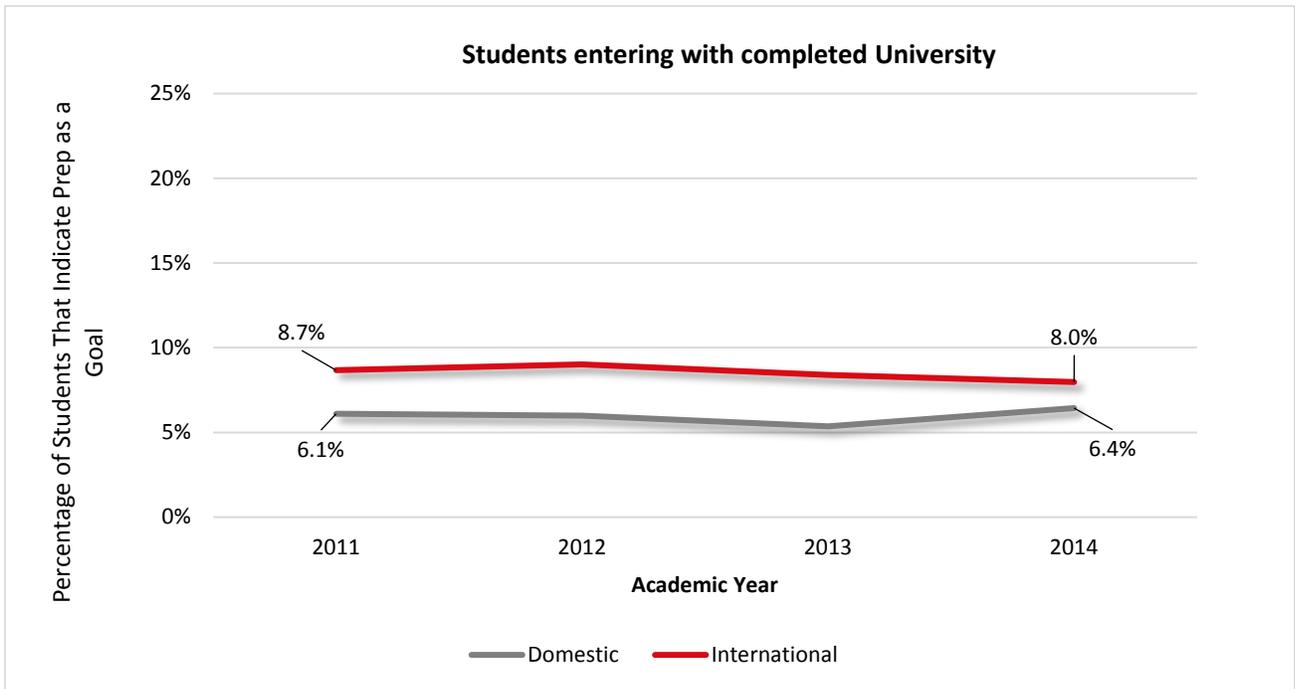
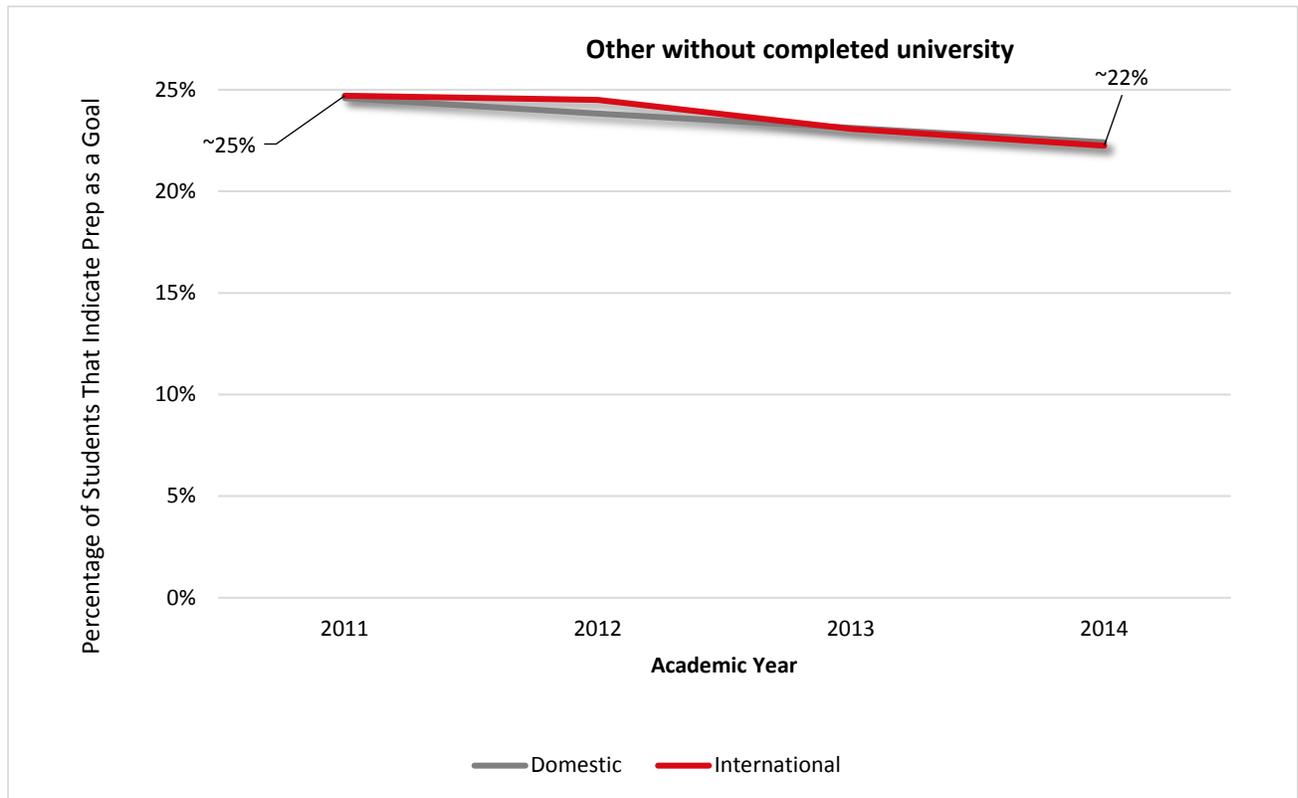


Figure 8. Students who indicate ‘prepare for further studies’ as a goal, without completed university, 2011 – 2014.



In this question, the academic goals of both groups are the same. International students may have other ultimate motivations, such as remaining in Canada to work with eventual hope to immigrate, but the desire for enhancing their academic credentials remains the same as their domestic counterparts.

Students with Completed University

Given the observed difference in incoming credentials and the concomitant goals, this section provides a brief description and comparison of only those domestic and international students who entered college with a completed university degree.

Figure 9 represents the standard demographic characteristics: age, gender, first language and parental education. The latter is of growing interest among educators. The data on parental data (to measure “first generation” post-secondary) was asked in only the previous two survey cycles so the number of respondents is less than the other characteristics listed.

Figure 9. Demographic characteristics of student with completed university, 2011 – 2014.

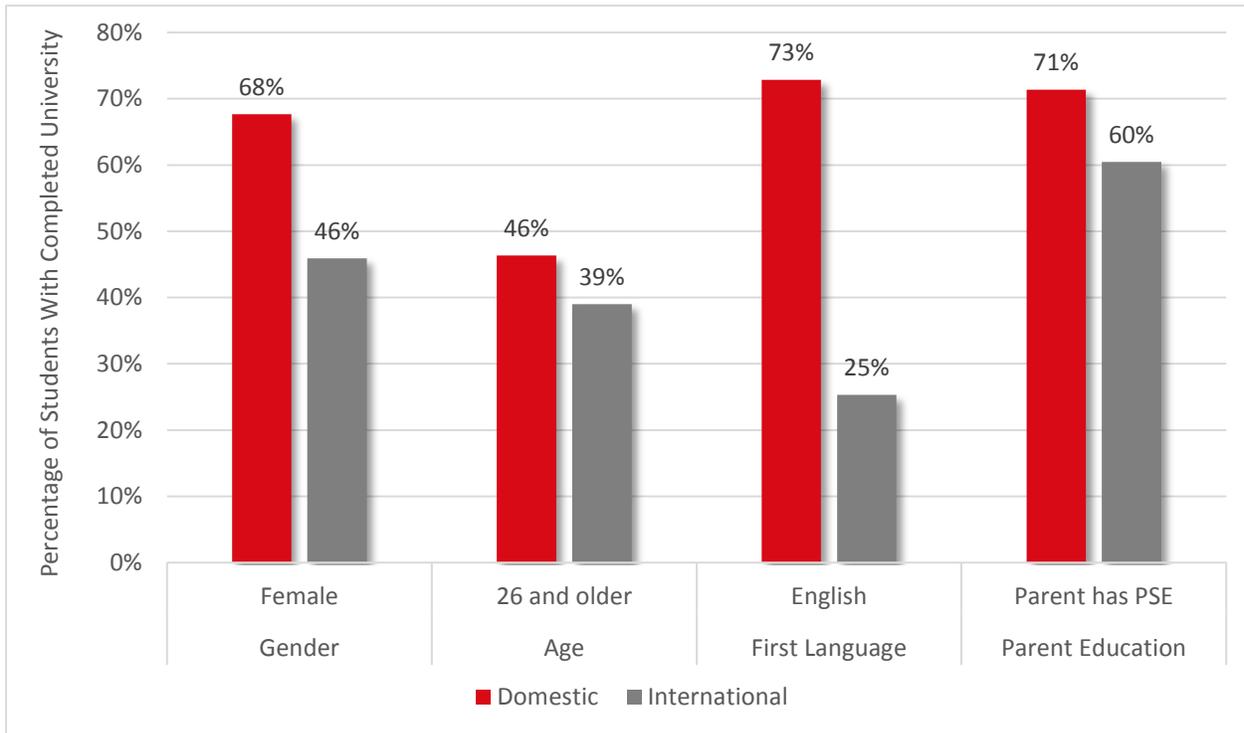
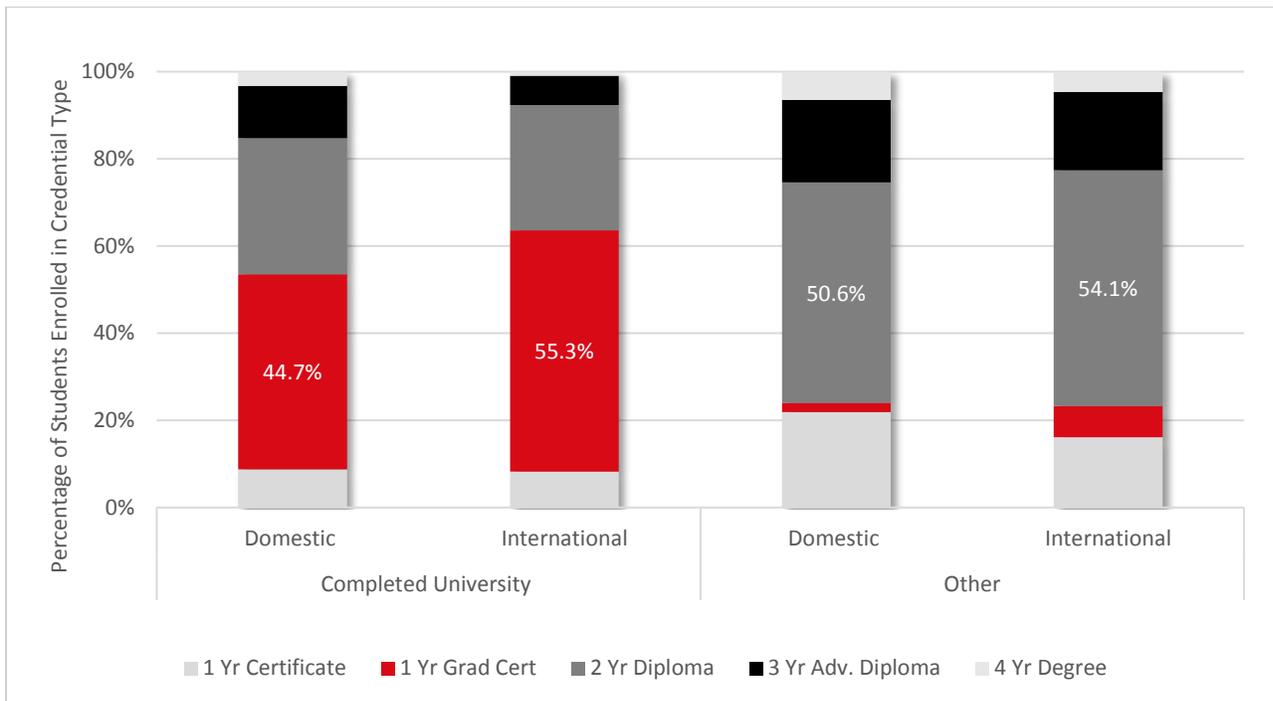


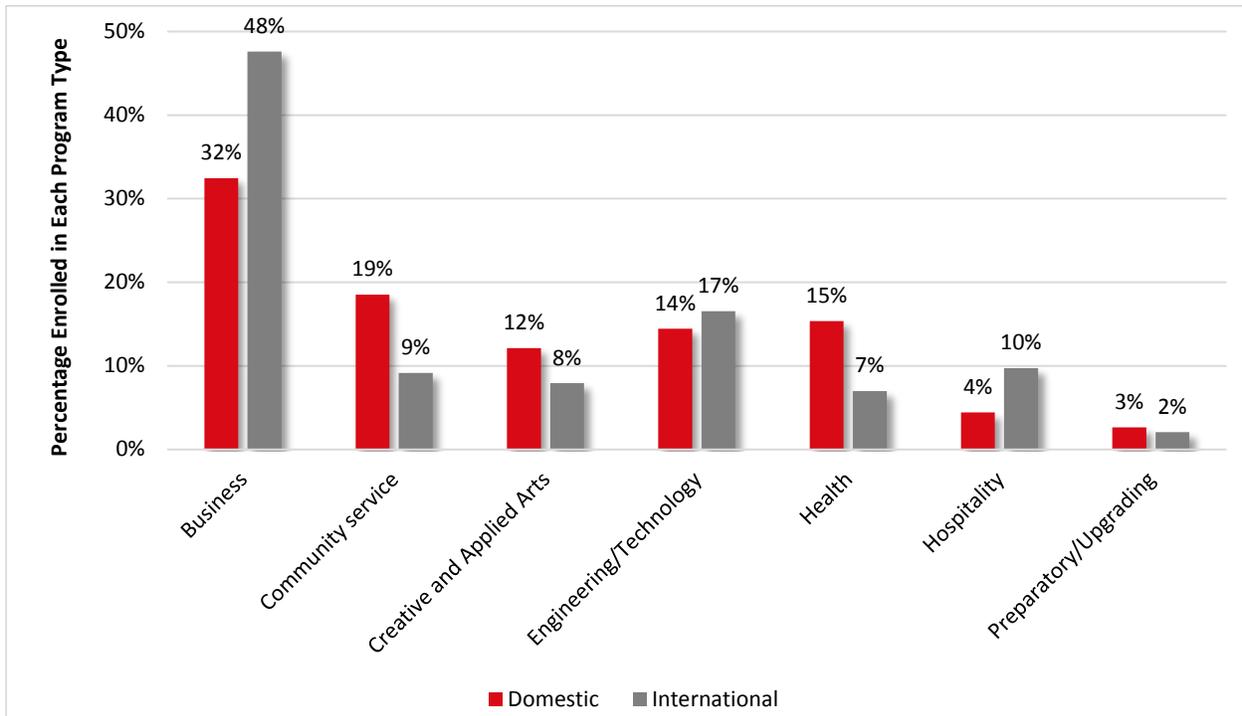
Figure 10. Credential selection, those who have completed university and other, 2011 - 2014



Domestic students with previous university are far more likely to be female (68%) than their international counterparts. Whereas more than two-thirds are female, the gender split for international students is more equal, with only 46% being female. The larger number of male international students is consistent with the discussion earlier. At the same time, international students with a degree are younger than domestic students with 39% older than 26 as compared to 46% respectively. Not surprisingly, these domestic students are considerably more likely to identify English as their first language. What may be surprising is the number of international students (25%) who answered the same, similar to the rest of the international student population and reflecting diversity in the countries of origin. Finally, this group of international students is less likely than the domestic student to report having at least one parent with previous post-secondary credentials.

Those students who had completed university were more likely to enroll in a graduate certificate at a rate of 44.7% for domestic and 55.3% for international. While these results may be expected, it is worth noting the large percentage of university educated students who are enrolled in other types of credentials. The two-year diploma remains common even among this group of students.

Figure 11. Program selection of students with completed university, 2011 – 2014.



Business programs are the most common choices for both domestic and international students, with almost half (48%) of the latter selecting from this area. The creative and social service type programs are considerably less likely to be selected by international students, second most common at 17% are the Engineering/Technology group of programs.

The differences in program selection between international and domestic students clearer when drilling down into the specific program of choice as shown in Table 4. This table illustrates how international students with university degrees are gravitating to business graduate certificates. The top program for domestic students, Human Resources Management, stems from business as well, and is in the top 5 for

international students; nevertheless, the choices for domestic students are broadened into the social service type programming. On the other hand, the most popular choices for domestic and international students who had not completed a university degree before enrolling has more similarities. Business continues to be selected more by international students, but they are enrolling also in the Early Childhood Education two-year diploma and the General Arts and Science certificate programs. The latter would likely be used as a preparatory to further college level programming.

Table 4. Top five programs selected, those that completed university and other, domestic vs. international, 2007-2014

	Completed University	Other
Domestic	1 Human Resources Management*	1 General Arts And Science - One-year
	2 Public Relations*	2 Police Foundations
	3 Practical Nursing	3 Preparatory Health Sciences
	4 Early Childhood Education	4 Early Childhood Education
	5 Collaborative Nursing	5 Practical Nursing
International	1 International Business Management*	1 Hospitality Management
	2 Project Management*	2 Business
	3 Human Resources Management*	3 General Arts And Science - One-year
	4 Global Business Management*	4 Business - Accounting
	5 Personal Financial Services*	5 Early Childhood Education

*Graduate certificate programs

Finally, international students with completed university are not only enrolling for the content of the various disciplines, they are enrolling also to gain additional so-called “soft skills” as illustrated in Tables 5 and 6 below. The Student Satisfaction Survey asks students to indicate to what extent specific attributes of programs and services are important and to what level of satisfaction they perceive these same attributes.

Developing speaking and writing skills were deemed to be more important for international students; and when asked about their satisfaction (Table 5), international students were much more likely to be satisfied or very satisfied with these attributes of the program. Indeed, international students were more satisfied with the overall facilities, resources, and services offered by the colleges, a reflection of their general college experience and support in making the transition to a new country.

Table 5. Criteria being reported as ‘Important’, students with completed university. Student Satisfaction Survey, 2011 – 2014.

Percentage of Students Reporting Criteria as Being “Important”		
	Domestic	International
Concern of people at this college for your success...	96%	95%
Overall college experience	98%	98%
Helpfulness of teachers outside of class	96%	95%
Quality of Learning Experiences in this program	100%	99%
Overall quality of facilities and resources in college	98%	99%
Program develops your speaking skills	88%	94%
Program develops your ability to work with others	95%	97%
Program develops your writing skills	80%	86%

Table 6. Students Reporting “Satisfied/Very Satisfied”, students with completed university. Student Satisfaction Survey, 2011 – 2014.

Percentage of Students Reporting Satisfied/Very Satisfied With...		
	Domestic	International
Program develops ability to work with others	83%	84%
Program helps you understand further education opportunities	53%	61%
Program helps develop speaking skills	66%	71%
Program helps develop writing skills	54%	64%
Concern of people at this college for your success	68%	61%
Employment/Placement/Career Services	41%	45%
Overall college experience	72%	75%
Overall quality of facilities and resources in college	70%	82%
Importance of helpfulness of teachers outside of class	71%	68%
Overall quality of services in the college	63%	72%
Overall quality of learning experiences in this program	80%	79%
This college provides information on social opportunities	50%	55%

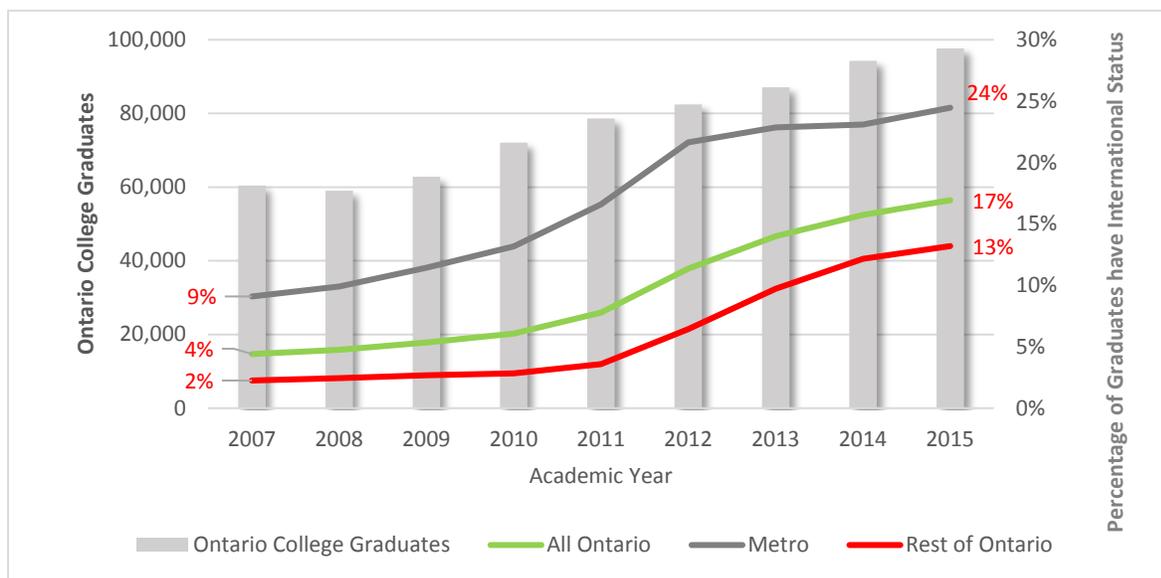
College Graduates in Ontario

In this section the focus shifts to data from the Graduate Satisfaction Survey where the answer to the research question on the transfer rate of international students can be derived. The individual colleges provide the list of graduates after each term to the Ministry for use by an external firm to conduct a telephone survey. The file provided by the colleges identifies the students as either ministry-funded or international and the survey firm attempts to reach as many students as possible. In the Student Satisfaction Survey the students are anonymous and all respondents are included when calculating the official Key Performance Indicator (KPI) results. For all official graduate KPIs, international students are not included. In all cases, the results for international students are not reported separately.

Ontario College Graduates

As the number of international students grows within the system a concomitant increasing percentage of Ontario college graduates reflects this student profile. Figure 1 quantifies the overall expansion of the system since 2007 as well as the more than quadrupling percentage of international student graduates. This growth is across the province with the colleges outside of Toronto accelerating at a faster rate. Almost a quarter of Toronto college graduates are international students compared to the rest of Ontario at 13% making for the overall percentage 17 in the 2015 reporting year.

Figure 12. Ontario College graduates, 2007 – 2015.



And continuing the previous section's description of program types, international students are graduating from Business programs in far greater numbers than any other area (45 percent). Engineering/Technology type programs are the second most at 21 percent whereas the social and service type programs rank considerably lower for international students and as compared to domestic students (see Figure 13).

Figure 13. Program type, Ontario College graduates, 2007 – 2015

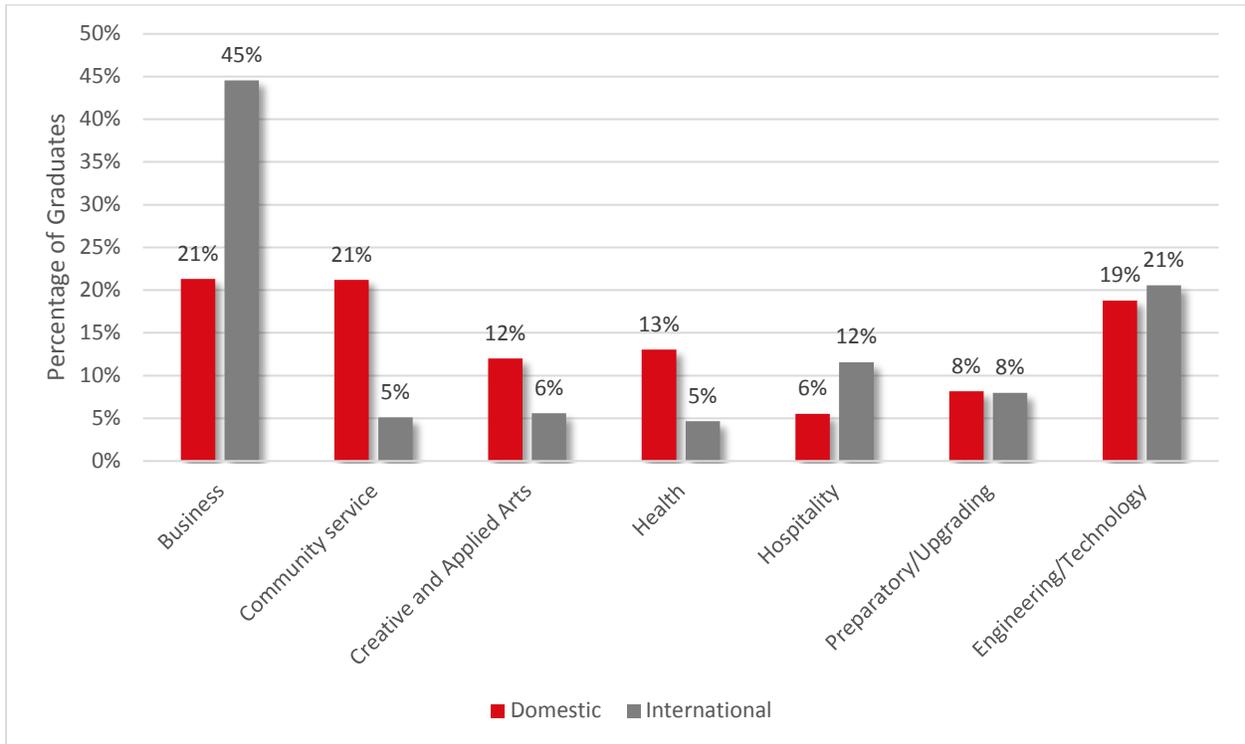
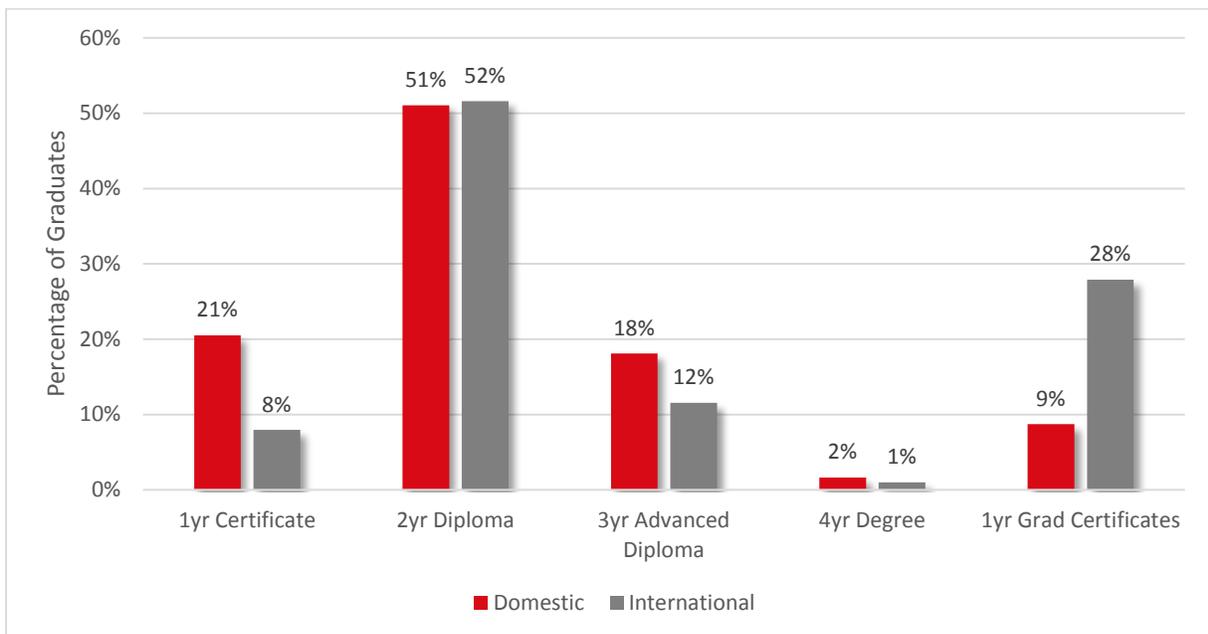
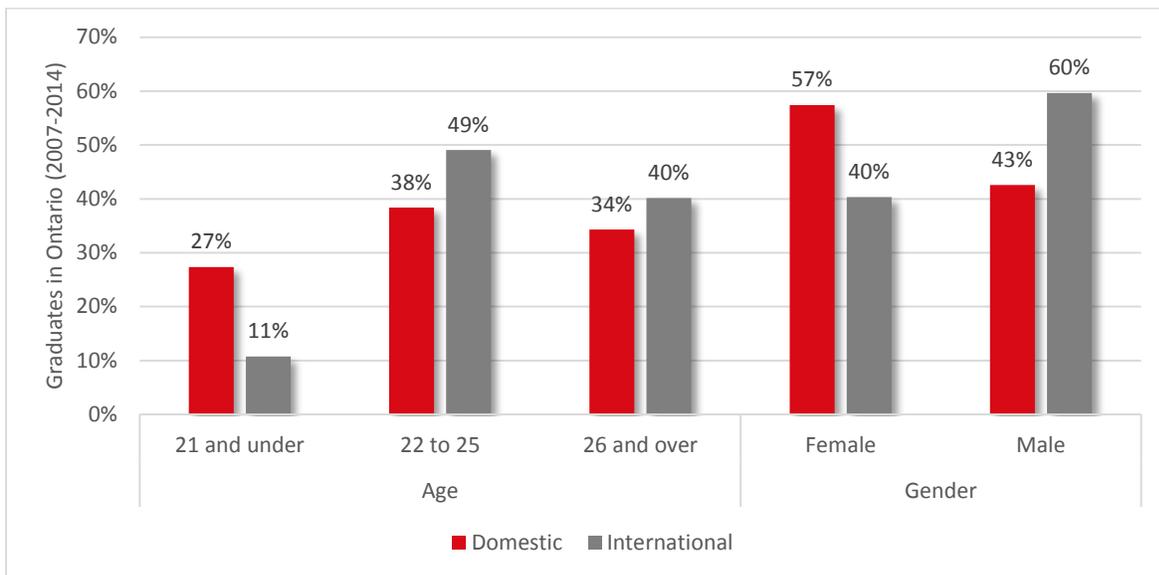


Figure 14. Program duration, Ontario College graduates, 2007 – 2015



The two-year diploma program remains the most common length of program in the system even though the recent emphasis is on the development of graduate certificates. Naturally, therefore, the largest percentage of graduates across the system for both domestic and international stem from the two-year diploma. The difference between the two groups is highlighted in the percentage of graduates from the one-year certificates and the graduate certificates at polar opposites. Whereas as 21 percent of domestic graduates are from one-year certificates this program duration accounts for only 8 percent of international; and for graduate certificates, the percentages are 9 and 28 respectively. These results are not surprising given the earlier discussion of previous credentials.

Figure 15. Select demographic characteristics of Ontario College graduates, 2007 – 2015.



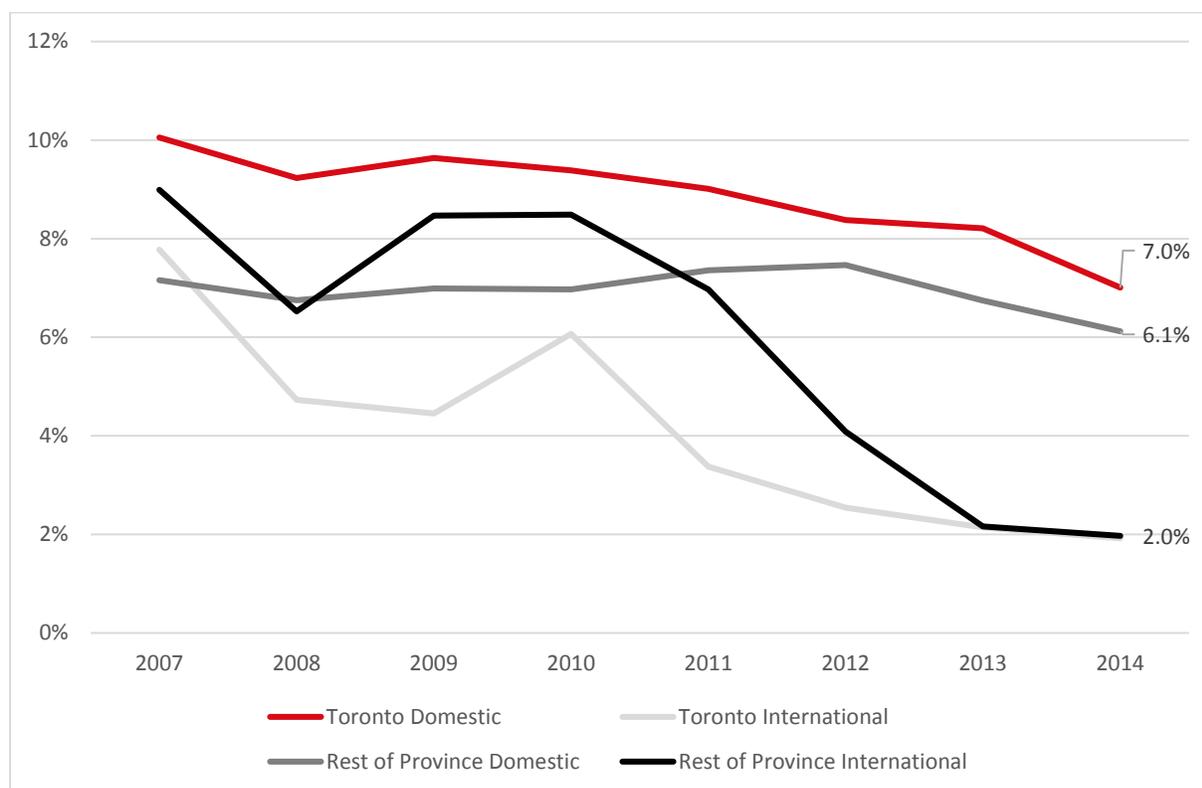
Consistent with that discussion, as well, the age of international graduates is higher than their domestic counterpart. Figure 15 shows the age categories and gender of all graduates comparing domestic and international students. (The graduate file contains a limited number of demographic characteristic categories unlike the student satisfaction survey containing several self-reported dimensions.) Domestic and international student graduates are distinguished by gender as well. Domestic graduates are almost 60 percent female compared to that same percentage representing the number of male international graduates. The difference is partially a function of type of program with a greater percentage of domestic graduates stemming from social service programs typically dominated by female students.

Transfer Rate to University by length of program

This final section addresses the college-to-university transfer rate of international students from 2007-2015 for the different length of programs. Transfer rates for Toronto colleges have been higher historically compared to those in other parts of the province; therefore, this discussion begins with that analysis.

In 2007, the transfer rate for international students was comparable to that of domestic students as shown in Figure 16. Except for a jump in 2010, the transfer rate for international students in Toronto has been in decline, down to 2.0 percent in 2014. In the rest of the province, the transfer rate for international students dropped significantly after 2010 to the same level international students in Toronto colleges. The transfer rate for domestic students in the rest of the province has also gone down but not to the same extent, and is now less than one percentage point different than the Toronto college transfer rate. It would appear international students have become less inclined to use the college system as a stepping stone into a university credential, certainly immediately following graduation. One factor may be the changes in rules to allow student work longer after graduation, which does not preclude a student from seeking another credential several years later.

Figure 16. Transfer rate all Ontario College domestic and international graduates, comparing Toronto and the Rest of the Province, 2007 – 2014



Transfer rates to university vary by length so the following description focuses on the different forms. Table 7 shows the percentage of Ontario college graduates respectively who transfer to university six months after graduation according to the Graduate Survey responses in the reporting years 2007 to 2015 from the credentials offered at colleges in the system. For each of the credential types the percentage of transfer to university has declined for both domestic and international such that the rate for the latter is consistently less overall now. (Domestic students completing degrees and International Graduate Certificate graduates are exceptions.) For domestic students, there has been a steady decline; for international students, the decline has been more precipitous.

In 2007, the transfer rate to university of domestic and international graduates from one-year certificate programs was relatively equal at 5.4% and 5.0% respectively. The percentage for domestic students gradually declined over the years to a low of 4% in 2014 with a reported rate of 4.7% in 2015. The rate for international students spiked to 7.8% in 2008, exceeding that of domestic, then dropped dramatically reaching a low of less than 2% in 2013 before a slight increase to 3.3% in 2015. The 2015 international student transfer rate represents less than half of the peak in 2008.

The transfer rate for domestic two-year diploma graduates declined by slightly more than two percentage points (from 8.4% to 6.2%) in the years displayed here, while the transfer rate of international students declined much more rapidly. In 2007, the transfer rate exceeded that of domestic students by one percentage point (9.4% compared to 8.4%) but then proceeded fall precipitously to a low of less than two percent before settling at 2.4% in 2015. The seven percentage point drop occurred in spite of ongoing growth in international student enrolment.

The transfer rate for advanced diploma programs show a slightly different but familiar pattern for both domestic and international graduate students. For both types of students the transfer rate exceeds that of the one year certificates and two year diplomas.

For domestic students the transfer rate rose slightly from 10.5% in 2007 to a peak of 12.0% in 2010 before it began a slow decline to 8.7% in 2015. The rate for international student graduates fluctuated in the 2007 – 2009 years, hit a peak of 17.8% in 2010 exceeding the domestic student rate by 7 percentage points. After 2010, the rate suffered dramatic a decline and eventually dropping to 3.9% in 2015 almost 4 percentage points below the rate for domestic students.

Table 7. Transfer rate by credential of Ontario College graduates, International and Domestic, 2007 – 2015

		2007-2010	2011-2015
Domestic	1 Year - Certificate	5.9%	5.0%
	2 Year - Diploma	7.8%	6.8%
	3 Year – Advanced Diploma	10.4%	10.8%
	4 Year – Honours Degree	2.8%	5.2%
	1 Year - Graduate Certificate	4.7%	4.4%
International	1 Year - Certificate	5.2%	2.7%
	2 Year - Diploma	7.0%	2.6%
	3 Year – Advanced Diploma	14.5%	5.8%
	4 Year – Honours Degree	1.1%	0.9%
	1 Year - Graduate Certificate	1.1%	1.5%

Amongst these three credentials, the rapid decline in transfer to university for international students occurred most predominantly after the 2010 reporting year. The increase for domestic students from degrees and for international students from Graduate Certificates is worthy of further investigation.

Transfer Rate to University by Program Type

Given the change in transfer rates for international students after the 2010 reporting year, the following analysis divides the comparison between the two periods and looks specifically at the program type across all credentials. Table 8 lists the seven program types offered by colleges across Ontario identifying the transfer rate for the reporting years 2007 to 2010 and 2011 to 2015 for both domestic and international students.

Table 8. Transfer rate by program type, Ontario College graduates, 2007 – 2015

Program Type	Domestic		International	
	2007/10	2011/15	2007/10	2011/15
Business	8.3%	7.6%	9.3%	3.7%
Community service	12.6%	11.3%	4.9%	1.9%
Creative and Applied Arts	4.6%	4.0%	3.4%	1.9%
Health	3.2%	2.7%	2.2%	0.5%
Hospitality	2.7%	2.5%	2.2%	1.3%
Preparatory/Upgrading	16.8%	13.6%	9.0%	3.6%
Engineering/Technology	4.0%	3.9%	3.3%	1.6%

As discussed, there has been a gradual decline in transfer rates for domestic students and the decline is seen across all program types. In some, like Hospitality and Engineering/Technology, the difference is marginal. The overall drop is accounted for largely within the program types which have shown historically higher rates of transfer: Community Service and Preparatory/Upgrading programs. The latter set of programs continue to have the highest rate of transfer but witnessed a 3.2 percentage point decline in transfer rates to 13.6% in the 2011 to 2015 reporting years.

For international students the rapid decline in transfer rates is marked in Business programs and in the Preparatory/Upgrading categories. In the 2007-2010 reporting years, Business international graduates in Business were transferring to university at a rate of 9.3%; in the 2011-2015 reporting years that percentage dropped to 3.7%. This difference represents the dramatic decline witnessed in the three year diploma programs which consists of a large number of Business programs.

In a very similar manner, the percentage of international graduates of Preparatory/Upgrading programs dropped in the same time period from 9.0% to 3.6%. This type of programs are populated largely by one year certificate and a small number of two-year diploma General Arts & Science program. And although the transfer percentage of Community Service is only have of the Business and Preparatory/Upgrading programs, it also declined in the same proportion, accounting for the overall drop in two-year diploma programs as discussed above.

Transfer Student Analysis

Examining Experiences of Domestic and International Students who transferred to University

The Graduate Satisfaction Survey attempts to understand the rationale for transfer asking graduates who are enrolled to state whether a preset list of possibilities was a major, minor or not a reason for transferring to university. Table 9 represents the percentage of domestic and international transfer students who answered major or minor for each of the reasons in the 2007 to 2015 reporting years. The last column in the table calculates the percentage point difference of international graduates to that of domestic graduates.

Table 9. Reasons for transferring to university, Ontario College graduates, 2007 – 2015

	Domestic	International	% pt. diff.
Potential for higher income	91%	84%	-8%
No work/ job available in your field of study	44%	46%	2%
To get diploma/ certificate/ degree	96%	93%	-3%
Interest in further/ more in-depth training in field	92%	86%	-6%
Interest in pursuing a different field of study	57%	68%	11%
Needed for professional designation	79%	81%	2%
Gain theoretical knowledge/ broader education	95%	88%	-7%
Encouragement from others (family members, friends, faculty)	76%	71%	-4%
More opportunities for career advancement	97%	93%	-5%
Upgrade/ improve skills	94%	94%	0%
There was a formal transfer agreement between your previous and your current program	67%	70%	3%
Company required/ paid for it	17%	31%	14%

International graduates identified upgrading/improving skills as the major or minor reason for 94% of those who transferred, the highest in the list of possibilities. More opportunities for career advancement was the highest amongst domestic graduates at 97%, the second highest for international graduates tied with obtaining a credential which was number three for domestic. The top three reasons for domestic and international were the same, albeit in a slightly different order.

Information Sources for Transfer

The Graduate Satisfaction Survey also seeks to ascertain the sources of information to inform transfer from those graduates who indicate they are enrolled in another post-secondary program on a full or part time basis. Respondents were asked to identify whether the source was a major, minor, or not a source. Table 10 shows the percentage who responded major or minor for domestic and international graduates with the last column calculating the percentage point difference between the two groups.

Table 10. Information sources for Transfer, Ontario College graduates, 2007 – 2015

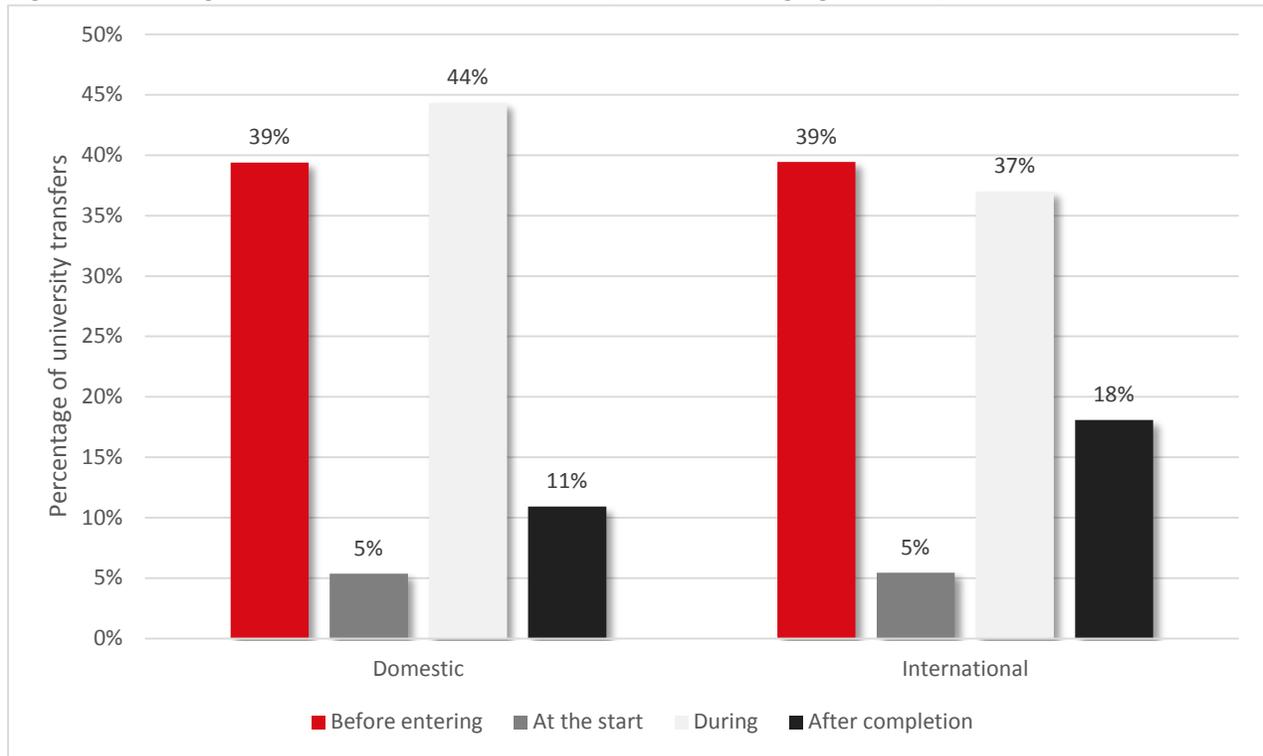
	Domestic	International	% pt. diff.
College Website	68%	77%	9%
College hard copy publications	49%	62%	13%
College faculty/ counselors/ program coordinators	73%	73%	0%
College administration, i.e. registrar's office, student services	64%	74%	11%
University website/ publications	87%	88%	1%
University staff (including registrar's office, faculty, etc.)	75%	81%	6%
Other students (including current and former college and university students)	74%	77%	3%
ONTransfer.ca web site	50%	56%	6%
Parents and family	70%	68%	-2%
College credit transfer advising services	62%	69%	6%
University credit transfer advising services	64%	74%	9%

The responses in the years 2007 to 2015 show how the international student utilizes college sources in greater numbers than their domestic counterparts whether that be the website, hard copy publications, administration or transfer advising services. A university website or publication and university staff are the two most common sources for both groups but overall, international students seem to be using all available sources in greater numbers. The exception is parents and family, but the percentage point difference is small. And, even though the ONTransfer website is used more by international than domestic transfer students (56 and 50 percent respectively), it had the most number who identified it as not a source for information on transfer.

Timing of Decision to Further Education

Respondents who answered the Graduate Satisfaction Survey and who transferred to another post-secondary program were asked to think back to when they made their decision. The possible categories are before entering, at the start, during their studies, and after completion of the program. Both domestic and international graduates stated, in equal numbers, their decision was made before entering their program (39%) or at the start of their education (5%) as shown in Figure 17. The two groups of students differed in the percentage of respondents who determined they would transfer after completing their program. For international students, it was 18 percent as compared to domestic students at 11 percent. The reason for difference is not apparent except for the responses to the question of skill development in the earlier discussion. Recall, international students saw the development of writing and speaking skills as important and were more satisfied with the teaching of these skills in their program. Perhaps the confidence in their abilities in these area upon completion of the program prompted them to seek additional credentials.

Figure 17. Timing of decision to further education, Ontario College graduates, 2007 – 2015



Transfer Pathways

In an earlier discussion, the data showed international students enrolled largely in business programs and therefore represented the highest percentage of graduates regardless of length of program. Table 11 represents the cross tabulation of college program of graduates with the university program in which they are enrolled. The table measures the extent of program affinity. By this measure, international students graduating from business programs are enrolling into business programs at a university, demonstrating a close affinity with their college education. Overall, 49 percent of international college graduates enrolled in a university business program, the highest percentage of any discipline.

Domestic graduates, on the other hand, were more likely to enroll in a university program within the social sciences with an overall percentage of 37. Graduates of community service programs were the largest source but the total includes those emanating from business, creative arts, technology and preparatory programs (see Table 12). While also showing a close affinity with the sending program for domestic students, the data in both tables reflect the differing enrolment patterns of domestic and international students.

Table 11. Sending (college) and receiving (university) programs of international students, Ontario College graduates, 2007 – 2015

	General Arts & Science	Education	Fine & Applied Arts	Humanities	Social Sciences (including commerce)	Commerce/ Business/ Administration	Agriculture & Biological Sciences	Engineering & Applied Sciences	Health Professions	Mathematical & Physical Sciences	Not Reported/ Not Applicable / Other	Total
Business	0%	0%	1%	1%	13%	44%	0%	1%	0%	1%	4%	65%
Community service	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	3%
Creative and Applied Arts	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	4%
Health	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%
Hospitality	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	4%
Preparatory/ Upgrading	0%	1%	0%	1%	3%	1%	0%	1%	1%	2%	1%	12%
Engineering/ Technology	0%	0%	0%	0%	0%	1%	0%	7%	0%	2%	1%	11%
Total	1%	1%	2%	3%	19%	49%	1%	9%	3%	6%	6%	100%

Table 12. Sending (college) and receiving (university) programs of domestic student, Ontario College graduates, 2007 – 2015

	General Arts & Science	Education	Fine & Applied Arts	Humanities	Social Sciences (including commerce)	Commerce/ Business/ Administration	Agriculture & Biological Sciences	Engineering & Applied Sciences	Health Professions	Mathematical & Physical Sciences	Not Reported/ Not Applicable / Other	Total
Business	0%	0%	0%	1%	3%	18%	0%	0%	0%	1%	1%	24%
Community service	0%	5%	0%	1%	25%	1%	0%	0%	1%	0%	1%	36%
Creative and Applied Arts	0%	0%	2%	2%	1%	1%	0%	0%	0%	0%	0%	7%
Health	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%
Hospitality	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	2%
Preparatory/ Upgrading	1%	1%	1%	2%	6%	1%	1%	0%	5%	0%	1%	18%
Engineering/ Technology	0%	0%	0%	0%	1%	0%	1%	6%	0%	1%	0%	11%
Total	2%	7%	4%	7%	37%	21%	2%	6%	8%	3%	4%	100%

Satisfied With Transfer Experience and Academic Preparation

This last section examines the level of satisfaction with the transfer experience and the academic preparation of transfer students. Respondents are asked to answer on a five point Likert scale ranging from very dissatisfied to very satisfied. Figures 18 and 19 document the results for domestic and international students of each question respectively, showing the percentage who were satisfied and very satisfied.

International transfer students were more satisfied overall than domestic transfer students (87% versus 81% respectively). The former were more inclined to answer satisfied whereas domestic appeared more very satisfied; nevertheless, international students responded more positively to the question on transfer experience.

Figure 18. Student satisfied or very satisfied with transfer experience, Ontario College graduates, 2007 – 2015

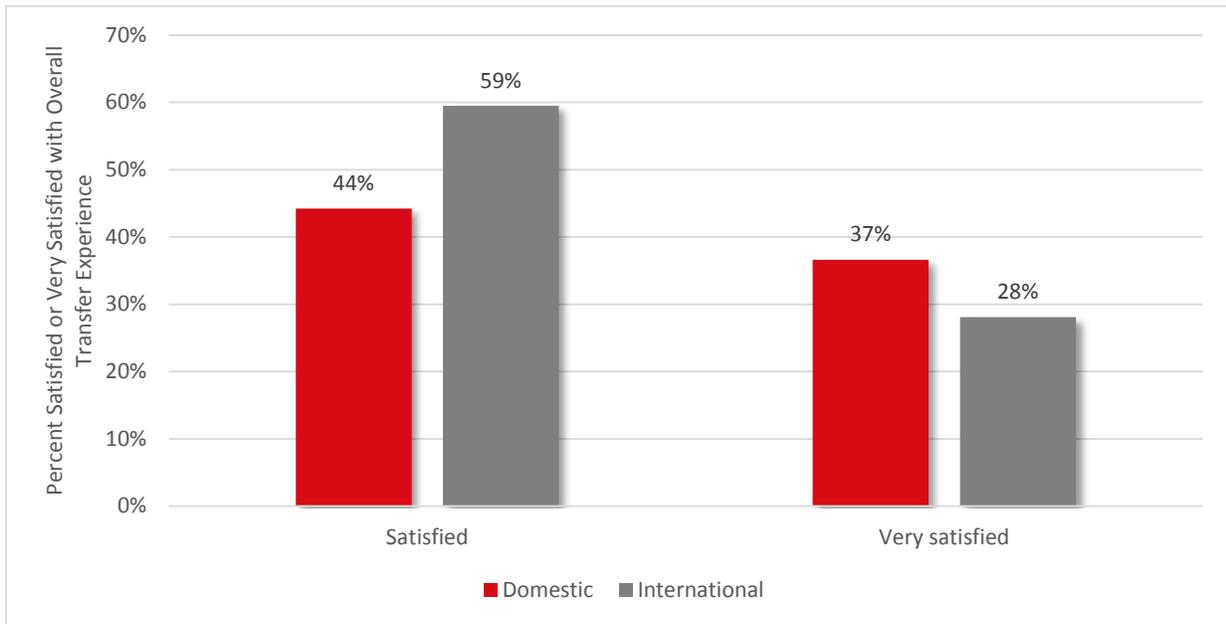
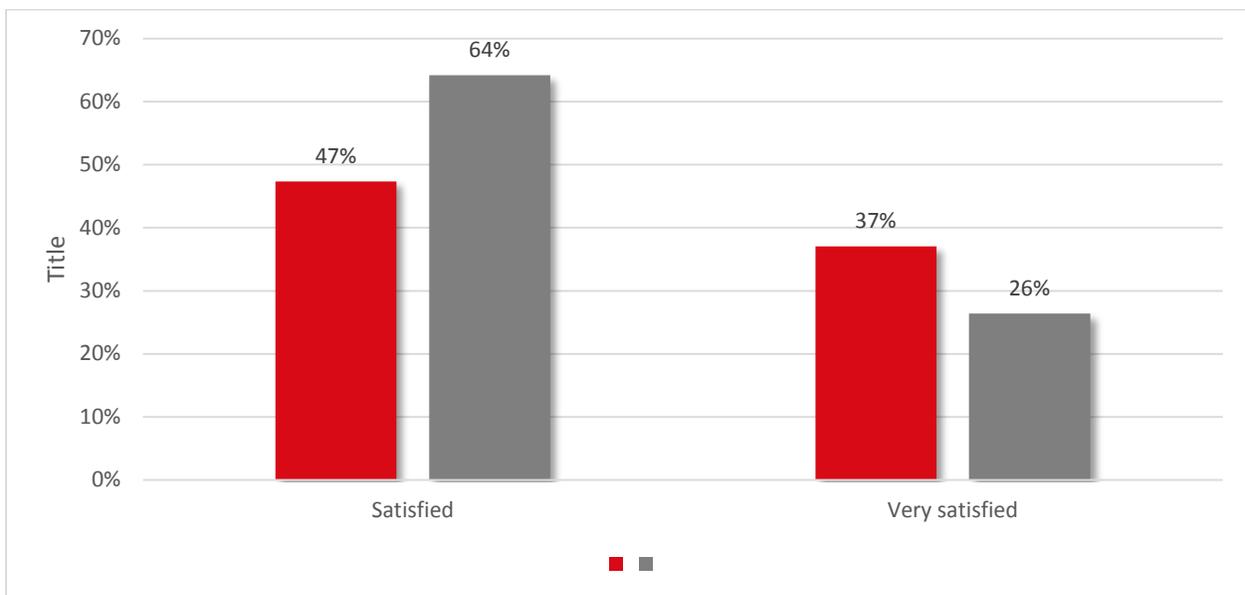


Figure 19. Student satisfied or very satisfied with academic preparation for current program of study, Ontario College graduates, 2007 – 2015



The same pattern occurs with the question about academic preparation. International students are more likely to be satisfied; and overall they are more satisfied than the domestic transfer students, 90% compared to 84% respectively. The level of satisfaction and entry into a university could be attributed to their desire to develop particular skills and their reported satisfaction with the program on these matters discussed earlier.

Summary of results

This report is an attempt to shed some light onto the demographic characteristics of a growing international college student population in Ontario and to document the academic outcomes specifically as it relates to transfer to a university. A comparison is made to the domestic student population using the provincial Student Satisfaction Survey and the Graduate Satisfaction Survey answering the two research questions: How do international and domestic students differ in Ontario colleges? And, How does college-to-university transfer differ for international and domestic students in Ontario?

In terms of differences of demographic and academic characteristics, the report shows:

- International students are becoming a much larger share of the college population.
- International students are attracted to business programs.
- International students are older and more likely to be male.
- Almost half of international students with a university degree are selecting into non-grad certificate programs.
- Relative to domestic students, international students are coming in with higher levels of education (specifically university degrees)
- In this subgroup of university educated students, international students are likely to enroll in graduate certificates, are younger, and are seeking support for writing and speaking skills
- The university educated international student is more satisfied with program in the development of these skills; and are more satisfied with the overall resources and services provided by the colleges.

With respect to academic outcomes after graduation, the report shows

- International students are a growing percentage of college graduates with a larger percentage emanating from business programs and graduate certificate programs.
- International students are more likely to make their decision about transfer after graduating from their program.
- Transfer rates for international graduates are lower than that of their peers, and transfer rates are declining over time.
- International students are more likely to enroll in a business program at a university showing a close affinity with their college program.
- International students report getting more transfer information from the college, and less from family.
- International students have higher levels of satisfaction with their transfer experience and academic preparation.

Conclusions

The growth of international students at Ontario Colleges of Applied Arts and Technology is an important trend to both individual colleges and the system. Because international students are rapidly becoming a singularly large portion of the college population, with different characteristics than their domestic peers, policy makers need to be receptive and responsive to their needs.

The data, from two provincially mandated surveys, provides some important demographic and academic characteristics. Relative to domestic students, international students are older, with a gender and male. International students appear to enroll for different reasons, a factor which can be mined further by examining questions related to student engagement in the student satisfaction survey.

There are demonstrated differences between international students enrolled in Toronto colleges and those enrolled in colleges for the rest of Ontario. The choice of programs for international students in the rest of the province is more in the area of Engineering/Technology which are traditionally male dominated and as such, reflect a larger number of male students. A larger number in international students in the rest of the province whose first language is English, also leads to a conclusion of different country of origin as compared to international students at Toronto colleges.

There exists, as well, a significant difference in the previous education of international students. Almost half have completed a university degree which in turn translates into a larger percentage enrolling in graduate certificate programming. The extent to which this reality affects pedagogy needs to be examined further. The large number of university educated students, regardless of programs, contributes, in part, to a decreasing number of international students transferring to a university in pursuit of a degree. Indeed, it appears international students are primarily using college as a second credential, particularly in recent years, and not as an automatic stepping stone to university.

The international students who are transferring to university are more likely to use college resources for information about transfer which should prompt institutions to examine their services in this area. Overall the international student appears satisfied with their experience; it is, therefore, incumbent upon colleges to understand the population and continue to provide the necessary resources for this burgeoning population.