

# Differentiation within the Ontario College System: Options and Opportunities

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Published by

## The Higher Education Quality Council of Ontario

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### Cite this publication in the following format:

Kaufman, A., Jonker, L. & Hicks, M. (2018). *Differentiation within the Ontario College System: Options and Opportunities*. Toronto: Higher Education Quality Council of Ontario.

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## Introduction

Since the establishment of the Colleges of Applied Arts and Technology (CAATs) in the late 1960s created parallel tracks in Ontario higher education, the system has tripped along more or less cheerfully in a fairly homogenous manner. Beyond this transformative (and now historical) differentiator, there have been few policy mechanisms implemented to disrupt the status quo. From a provincial policy perspective, none of Ontario's publicly funded colleges or universities receive special treatment. For 50 years, colleges have operated within a framework of shared policy and funding instruments. Different accommodations — for institutions in remote areas, or those serving particular populations, for example — have been treated as exceptions to the rule.

The move to consider differentiation as an important component of a quality postsecondary system is a significant shift in Ontario. Government has turned to differentiation as a tool to achieve the interconnected goals of ensuring equity of access to higher education for all Ontarians, improving outcomes for students and achieving sustainability within the sector. Differentiation has become a strength.

First and foremost, differentiation provides greater choice for students — both in terms of options for academic study, and for campus culture and climate. When used to leverage and focus institutional strengths and contributions, differentiation can help steer the system toward its objectives. As an overall strategy tool, differentiation can eliminate duplication of effort, direct the effective allocation of resources, and contribute to the efficient and responsible use of public funds.

To use differentiation effectively as a lever to achieve sustainability, quality and access, it is imperative to first understand existing differences within the system. What are the strengths and profiles of individual institutions? How have they diverged spontaneously over time? How have they capitalized upon their natural differences? What opportunities exist to leverage and support institutional differences through nuanced and sensitive funding mechanisms? Moreover, what policy and service delivery strategies — at both the provincial and institutional levels — will be required to encourage differentiation?

In this paper, a companion to [\*The Differentiation of the Ontario University System: Where are we now and where should we go?\*](#) (Hicks & Jonker, 2016), we continue our data-driven understanding of differentiation among public postsecondary institutions, this time with a focus on the student experience at Ontario colleges.

## Differentiation as Provincial Strategy

In fulfilment of HEQCO's mandate to provide the government of Ontario with evidence-based research to support the continued improvement of the postsecondary education system, we provide policy recommendations to the Ministry of Advanced Education and Skills Development (MAESD) to enhance the access, quality and accountability of Ontario's colleges and universities. Differentiation touches upon all three of these pillars, and we have published extensively on this since 2010, when we first examined the benefits that flow from increased differentiation (Weingarten & Deller, 2010; Weingarten, Hicks, Jonker & Liu, 2013; Hicks, Weingarten, Jonker & Liu, 2013; HEQCO 2013a). Our most recent publication on this topic — a companion paper to this one — looked at student-focused dimensions of differentiation in Ontario universities (Hicks & Jonker, 2016).

Differentiation has become a priority for MAESD. The [Differentiation Policy Framework](#) released in November 2013 positions differentiation as “a primary policy driver,” and the ministry has begun implementing tools to “align its policies, processes and funding levers” with the framework. The most obvious of these are Strategic Mandate Agreements (SMAs), negotiated with each public postsecondary institution. SMAs document the institution's differentiated approach, identifying program offerings, services and characteristics that each considers unique within the Ontario postsecondary system.

The second major lever for differentiation is the funding formula. Revisions undertaken in December 2016 reinforce the government's focus on differentiation through the implementation of funding corridors, which allow for strategic enrolment management on the part of individual institutions, and the creation of a separate envelope to fund quality initiatives intended to support the development of programs and services that meet the unique needs of their students and their overall strategic goals.

We continue to view the topic of differentiation through a system-wide lens. Differentiation for its own sake may well result in more interesting institutional profiles, but it is most powerful when used as a strategy to help achieve shared provincial objectives. Moreover, a push toward greater differentiation for its own sake (absent clearly defined, system-wide goals, for example) carries with it the large and completely avoidable possibility of creating imbalance, resentment and waste. Differentiation is an important and potent tool, but it must be implemented purposefully.

Within this context, it is worth considering Ontario's goals for the public postsecondary system, which were articulated in a 2016 HEQCO blog post (Weingarten, 2016):

- **More equitable access and success for all students:** Differentiation serves this objective by providing Ontarians with real choices among institutions. It helps the province better serve a diverse range of students with varying needs and aspirations. It also reinforces the unique role of colleges within their communities, positioning them to develop local relationships and partnerships.
- **Higher quality outcomes:** Differentiation serves this objective by capitalizing on the strengths of individual colleges in all facets of their mission, strengthening the province's overall capacity by optimizing the contributions of constituent institutions within the system.

- **Greater financial sustainability of the system and its institutions:** Differentiation serves this objective by reducing duplication of expenditures and focusing on targeted investment that builds on each institution's areas of strength. Finally, differentiation concentrates resources toward provincial objectives related to quality and access.

Past practice in Ontario suggests that in the absence of explicit direction, institutions will drift towards homogeneity. HEQCO's 2013 expert SMA review panel observed a tendency to greater homogenization of the system rather than greater differentiation (HEQCO, 2013a). In the college sector particularly, there are structural reasons for this trend. Whereas Ontario's public universities were established by independent legislation, Ontario's 24 CAATs were created in one fell swoop and are governed collectively by the [Ontario Colleges of Applied Arts and Technology Act](#). Historically, there has been one funding formula for all colleges, with a common set of rules under which all institutions strove to maximize their share of available revenues. There is a shared tuition policy, and fees for comparable programs across the province are relatively consistent. These are powerful forces of homogeneity.

## Dimensions of College Differentiation

By definition, differentiation is a relational rather than individualistic assessment; an institution can be differentiated only in comparison to others. So, then, what are the differentiated profiles of Ontario colleges? Our previous analysis of college differentiation, [The Diversity of Ontario's Colleges: A Data Set to Inform the Differentiation Discussion](#) (Hicks, Weingarten, Jonker & Liu, 2013), resulted in the grouping of institutions based on measures of degree granting, regional programmatic diversity and research activity. Out of interest and as a precursor to this paper, we have updated the main components of that analysis to assess the degree of change or variation four years on. Spoiler: things look pretty similar. Our updated analysis (see Appendix A) demonstrates a comparable distribution of results on these dimensions using current data. This suggests not only that the trends revealed in our original analysis continue to hold true, but also that there has been little in the way of significant movement toward greater differentiation in the interim.

Our approach in writing this paper has been to use the most pertinent distinguishing feature with regard to college differentiation — credential mix — as the frame around which to expand our analysis to student experience indicators.

### Student Success Indicators and Methodology

The college sector has 50 years of experience in developing high quality, accessible programming that is in touch with local labour-market needs. To the extent that institutions have differentiated themselves from one another, they have done so based on regional diversity, areas of academic focus, credential offerings and prospective student markets. The most efficient approach to encouraging more differentiation within this mature system will be to use the existing strengths of individual institutions and/or sets of institutions with similar profiles.

In our quest to continue building a balanced and complete picture of differentiation among the 24 colleges in Ontario, we have compiled available data that reveals differentiation in the dimensions of equity of access, demand and demographics, student experience (the learning journey) and graduate outcomes.

The dimensions:

- **Equity of Access** indicators reflect the postsecondary enrolment of Ontarians from lower socioeconomic backgrounds and other underrepresented groups.
- **Demand and Demographics** indicators demonstrate student preference and program selection as well as regional demographic trends.
- The **Learning Journey** comprises the learning environment, student experience and completion rates.
- **Graduate Outcomes** indicators demonstrate resultant success in the job market and the graduate's ability to repay student loans.

Table 1 lists the individual indicators that inform each institution's profile in the four dimensions articulated above. For detailed information about these indicators, see Appendix B.

**Table 1: Indicators and Dimensions of College Differentiation**

<p><b>Equity of Access</b></p> <ul style="list-style-type: none"> <li>1.1 % First-generation students</li> <li>1.2 % Aboriginal students</li> <li>1.3 % Students with a disability</li> <li>1.4 % Francophone students</li> <li>1.5 OSAP participation rate</li> <li>1.6 % Part-time students</li> <li>1.7 % Students aged 25 +</li> <li>1.8 % Indirect-entry students</li> <li>1.9 % Students with prior PSE</li> <li>1.10 Student mobility rate</li> </ul>	<p><b>Demand and Demographics</b></p> <ul style="list-style-type: none"> <li>2.1 Applicant-to-registrant ratio</li> <li>2.2 First choice</li> <li>2.3 % International students</li> <li>2.4 % Ontarians from home region</li> </ul>
<p><b>Learning Journey</b></p> <ul style="list-style-type: none"> <li>3.1 Retention rate</li> <li>3.2 Graduation rate</li> <li>3.3 Class size</li> <li>3.4 % Graduates in a program with WIL</li> <li>3.5 Student satisfaction</li> </ul>	<p><b>Graduate Outcomes</b></p> <ul style="list-style-type: none"> <li>4.1 Graduate employment rate</li> <li>4.2 Graduate average earnings</li> <li>4.3 Graduate job relatedness</li> <li>4.4 Employer satisfaction rate</li> <li>4.5 Loan default rate</li> </ul>

Our intent in this paper is to examine and analyze this data at the aggregate level to better understand institutional differentiation within the system as a whole. To make this work, we have standardized reporting of our indicators to present rates or percentages, rather than sheer numbers. If we were to report numbers only, large institutions (Humber, Seneca or Algonquin, for example) would consistently show a higher score simply because they have more students. This could lead to incorrect conclusions, both positive and negative, about institutions. In the context of this analysis, size does not matter. We are trying to understand relational institutional character, and this can only be revealed through proportion or rate-based analysis.

## Beyond the Diploma: Credential Mix as a Fundamental Differentiator

The data indicates that credential mix has become an important component of differentiation between colleges. Degree programming, in particular, has been revealed as a significant inter-institutional differentiator. Some institutions have engaged heavily in the degree space while others have proceeded more slowly or chosen not to go down the path at all. From a provincial policy perspective, granting colleges the ability to offer undergraduate degree programs is undoubtedly the most significant feature of differentiation to impact postsecondary education in Ontario since the creation of the college system itself more than 50 years ago.

Another oft-cited indicator of the trajectory of college programming is the graduate certificate. Graduate-certificate programs provide intensive and practical industry-focused training to students who already have formative postsecondary education under their belts, building on the knowledge and experience they gained through previous study.<sup>1</sup> Between 2005–06 and 2015–16, the number of students studying in graduate-certificate programs at Ontario colleges almost doubled, and the percentage of graduate certificates as a proportion of overall college enrolment — which also increased dramatically during that time — rose from 3% to 4.3%.<sup>2</sup> Colleges Ontario reports that 29% of college students in 2015–16 had previously completed a college and/or university credential (16.5% were university graduates). Almost half — 46% — had some previous postsecondary experience. (Colleges Ontario, 2017)

In our effort to identify patterns and trends in differentiation, we have chosen to use a credential-based lens through which to view our analysis of student success indicators. We used a cluster analysis<sup>3</sup> to determine whether there was a mathematical basis for grouping colleges based on the indicators examined in this report, and found that the most obvious pattern related to intensity of degree granting and graduate-certificate programming. Thus, we have grouped the 24 colleges into three categories (high intensity, medium intensity and low intensity) based on their level of activity in degree and graduate-certificate programming.

We have chosen this approach for two reasons. First, the establishment of college bachelor's degrees was revealed in HEQCO's original analysis of college differentiation as the most significant contribution to differentiation within the sector since the creation of the colleges themselves and is still the most relevant. Second, our analysis with regard to institutional trends in degree granting reveals a correlation between degree and graduate certificate activity and geographic location in areas of demographic demand. Given the current and future trends in demographics, we are keen to explore this finding.<sup>4</sup>

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<sup>1</sup> There is a fairly pervasive narrative within the sector that colleges are providing university degree graduates with a necessary-for-employment set of skills and experience (i.e., colleges as “finishing schools”).

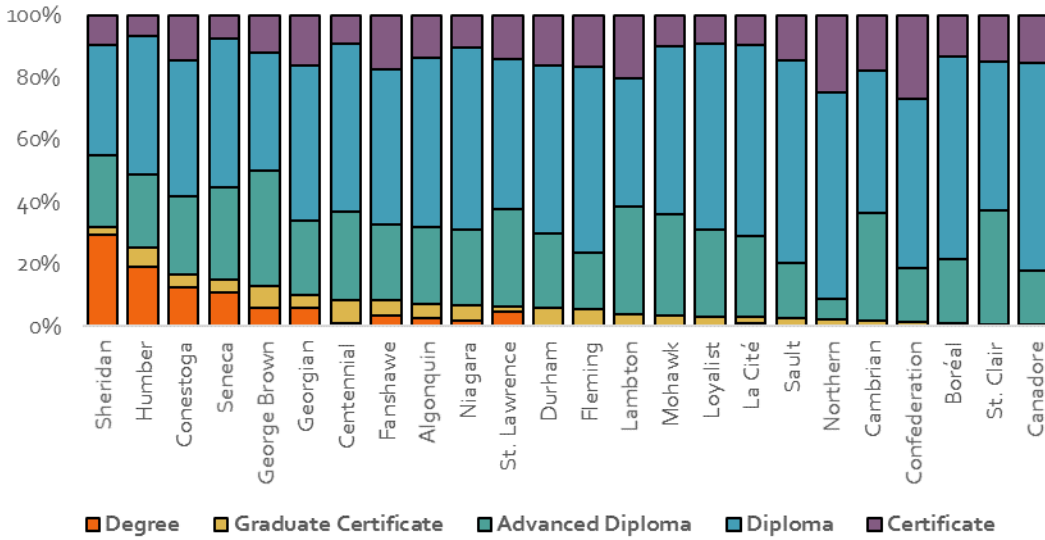
<sup>2</sup> Based on enrolment data from MAESD.

<sup>3</sup> We applied a single-linkage clustering, average-linkage clustering, and Ward's Method across each of the four dimensions and across all 24 indicators. These types of clustering methods are all forms of agglomerative hierarchical clustering and are commonly used to group similar observations together based on selected characteristics.

<sup>4</sup> For a detailed consideration of demographic trends in Ontario, see *College Sustainability: Signal Data* (Weingarten, Kaufman, Jonker & Hicks, 2017).



**Figure 1: Full-time Enrolment of Domestic Students by Credential<sup>5</sup>**



Source: MAESD, 2016-17

<sup>5</sup> For this analysis, we have chosen to focus on enrolment by credential for domestic students only, and to look at the international student population as a separate measure of differentiation.

## Differentiation Among Ontario Colleges: Analyzing the Data

The remainder of this paper will be structured around the presentation of data aggregated to our four dimensions. We have presented the data in two ways. The first approach looks for patterns of differentiation among the three clusters of colleges we have identified based on credential mix. Specifically, we have categorized institutions as high intensity, medium intensity or low intensity in terms of their full-time domestic enrolment in degree and graduate-certificate programs. The second approach looks at each college individually, on the basis of the four dimensions we have identified: equity of access, demand and demographics, the learning journey and graduate outcomes.

### Approach 1: Patterns among the three clusters

The heat table (Table 2) offers an opportunity to look for patterns among the 24 CAATs based on the indicators within the four dimensions. We have sorted the institutions according to level of activity (enrolment) in these program types. We have intentionally not identified the names of the individual institutions so as to focus more readily on any gradients or patterns within the three clusters with regard to the dimensions, and to check the reader's natural inclination to perceive the map as some sort of ranking.

High Intensity	Medium Intensity	Low Intensity
Centennial	Algonquin	Boréal
Conestoga	Durham	Cambrian
Fanshawe	Fleming	Canadore
George Brown	Niagara	Confederation
Georgian	Lambton	La Cité
Humber	Loyalist	Northern
Seneca	Mohawk	Sault
Sheridan	St. Lawrence	St. Clair

The colleges are sorted from highest value to lowest for each indicator except two — OSAP default rates and class sizes — where we sort from lowest value to highest. The grey cell represents one case where data was not available for every college.

The purpose of the heat map is to reveal patterns that might exist. For example, in the dimension of demand and demographics, institutions that have less activity in the degree and graduate-certificate space are slightly clustered at the low end of the values axis. In the learning journey dimension, there is some clustering of the same “low degree/grad-certificate intensity” institutions near the high end of values. We present the heat table here for perusal and discuss its implications further in the observations section.

**Table 2: Heat Table — Summary of Results**

High Intensity
  Medium Intensity
  Low Intensity



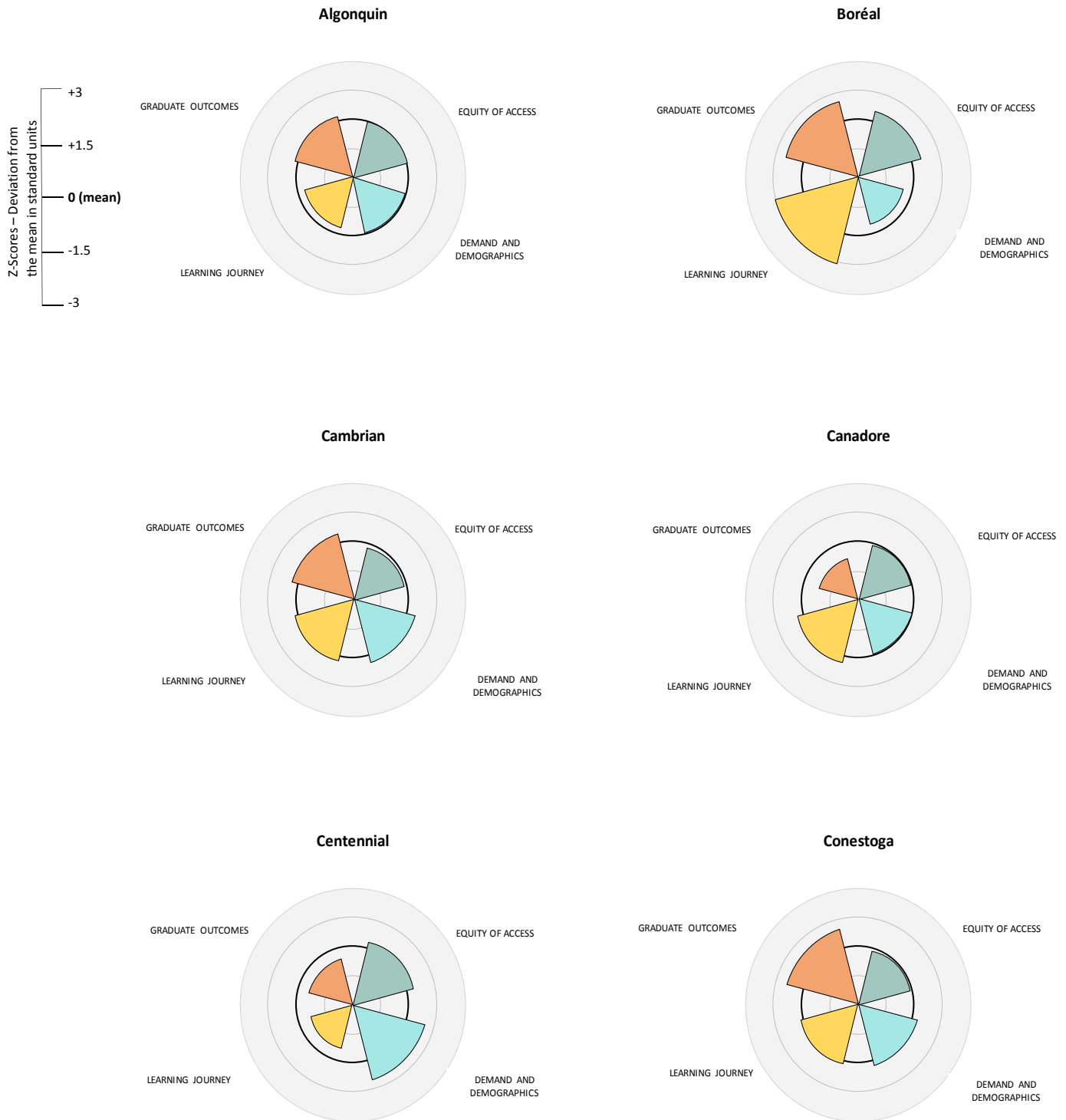
## Approach 2: Individual college profiles

In the following section we provide a visual representation of each college's profile related to the four dimensions. The institutional pinwheels enable an understanding of individual college profiles at a glance and reveal areas of institutional strength and difference.

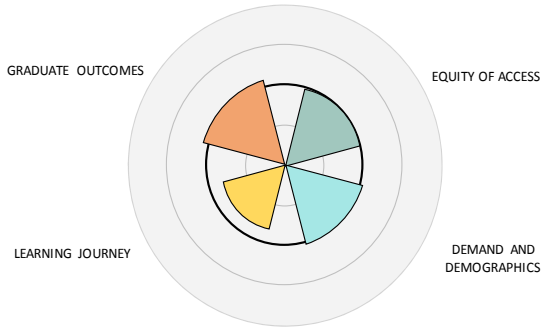
To compare performance of these indicators, we standardized the data values across the 24 colleges for each indicator. Standardization allows us to compare average earnings to average class sizes and average OSAP participation rates — all of which are expressed in different units of measurement. We then averaged these standardized scores across each dimension. Standardization further allows us to identify the degree of dispersion or variance across colleges for each indicator.

The following figures show the profile of each of the colleges across the four dimensions scaled on concentric circles, which show the standard deviation from the system average (represented by the bolded circle). An average z-score below 0 indicates below-average performance. An average z-score of 0 represents performance close to the system average for that dimension.

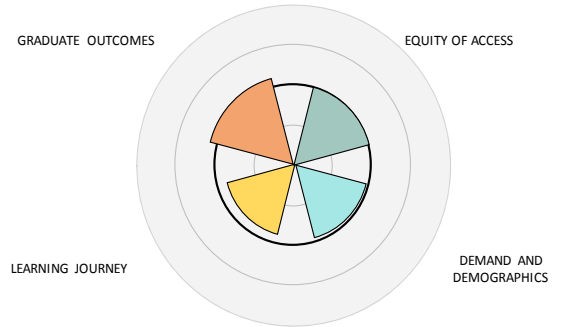
## Figures 2–25: Institutional Profiles



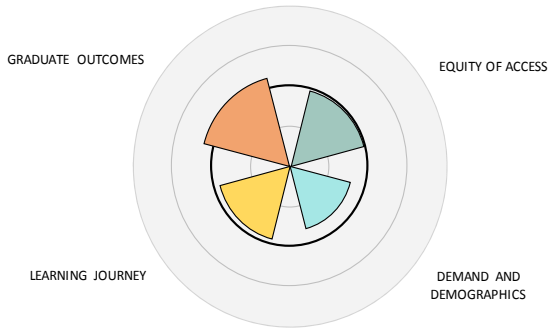
### Confederation



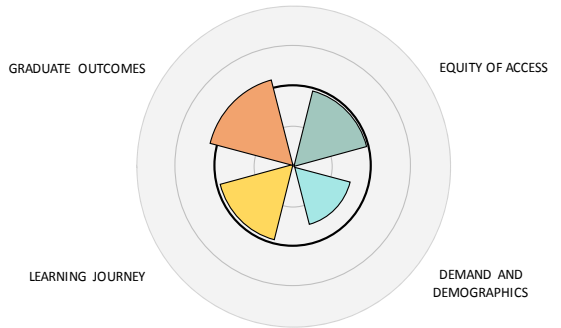
### Durham



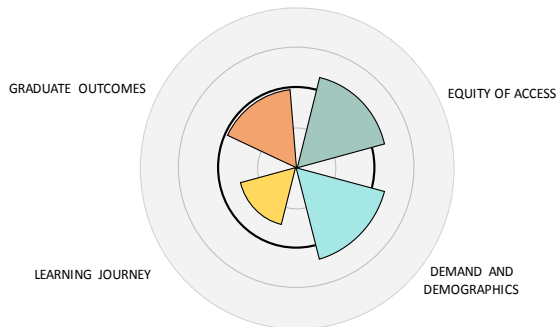
### Fanshawe



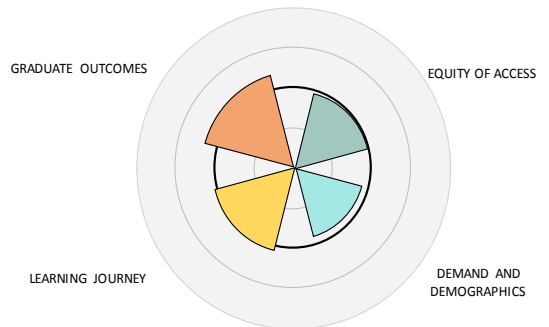
### Fleming



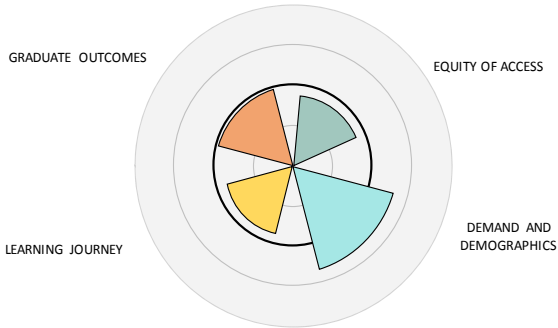
### George Brown



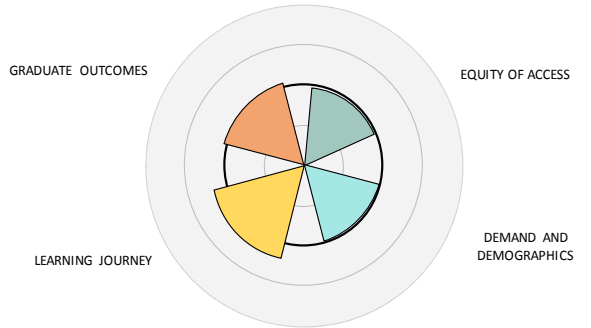
### Georgian



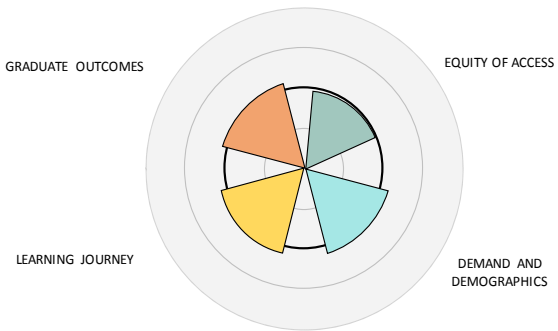
**Humber**



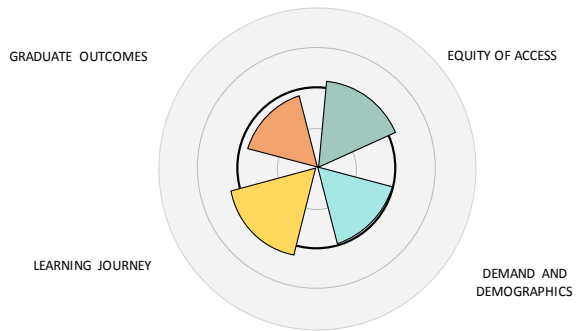
**La Cité**



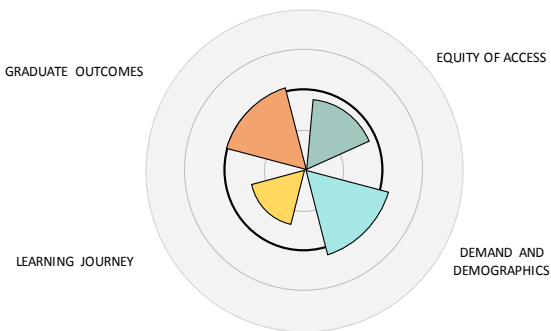
**Lambton**



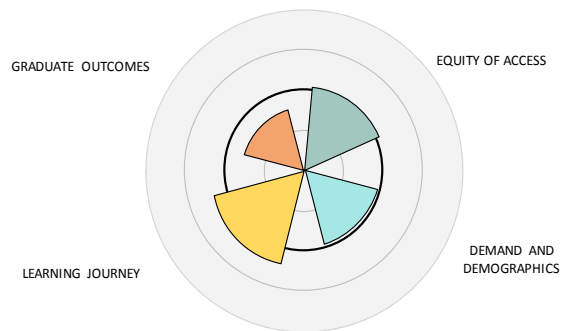
**Loyalist**



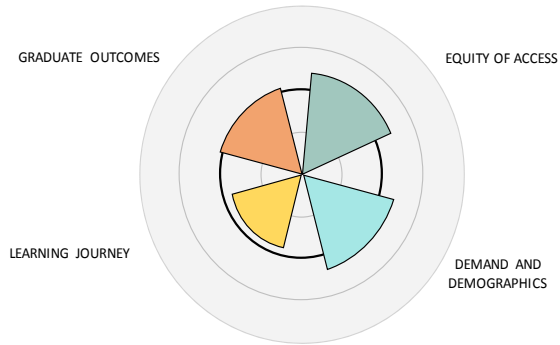
**Mohawk**



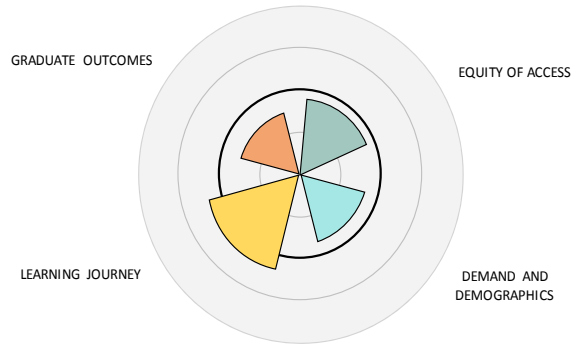
**Niagara**



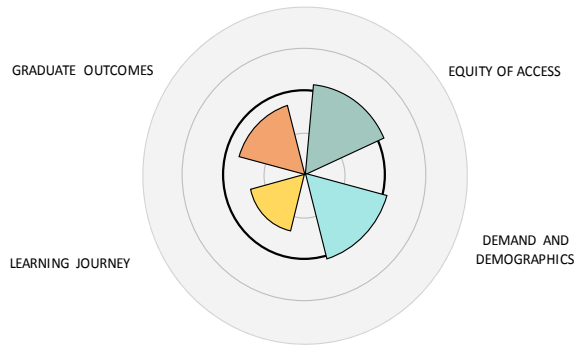
### Northern



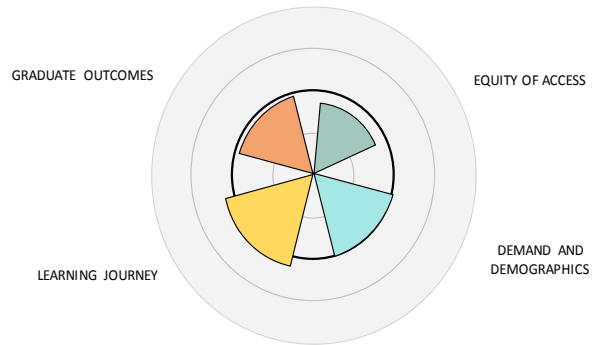
### Sault



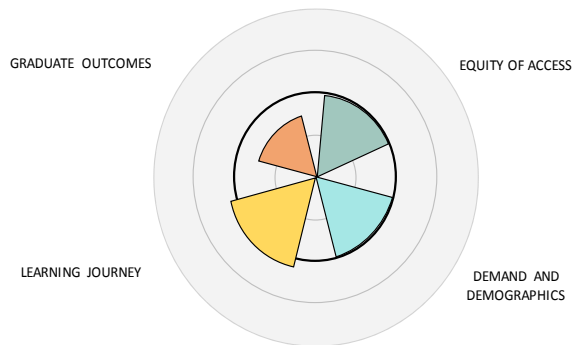
### Seneca



### Sheridan



### St. Clair



### St. Lawrence

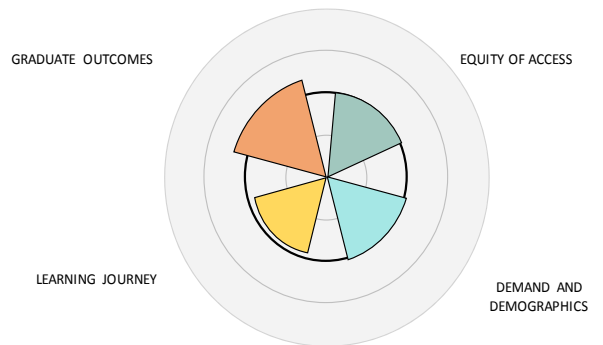




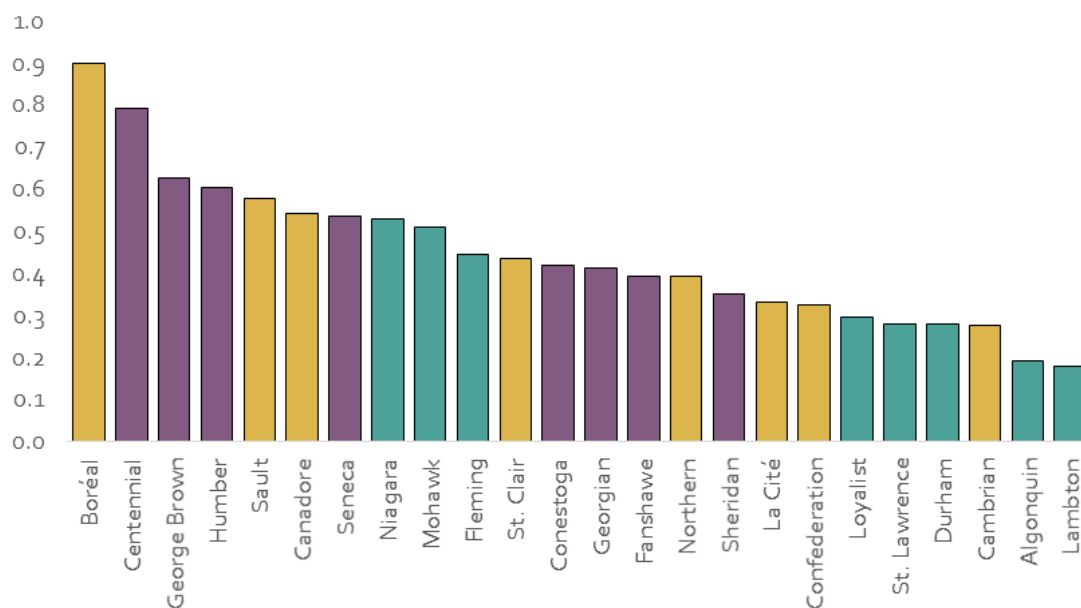
Table 3 shows the average standardized scores — or z-score values — used to create the preceding Figures 2–25. In the right-hand column (standard deviation) is the degree of variance across the four dimensions for each college; the lower the standard deviation, the more balanced or well-rounded the institutional profile across the dimensions. This can be seen visually in Figures 2–25 by observing the “roundness” of each institution’s wheel.

**Table 3 Average Standardized Z-Scores and Dispersion**

	<b>Equity of Access</b>	<b>Demand and Demographics</b>	<b>Learning Journey</b>	<b>Graduate Outcomes</b>	<b>Standard Deviation</b>
Algonquin	0.0	-0.1	-0.3	0.2	0.2
Boréal	0.4	-0.5	1.6	1.0	0.9
Cambrian	-0.2	0.3	0.3	0.4	0.3
Canadore	-0.1	-0.1	0.4	-0.9	0.5
Centennial	0.4	0.9	-0.7	-0.6	0.8
Conestoga	-0.1	0.2	0.2	0.9	0.4
Confederation	0.0	0.0	-0.5	0.2	0.3
Durham	0.0	-0.2	-0.3	0.3	0.3
Fanshawe	-0.1	-0.6	-0.2	0.4	0.4
Fleming	-0.1	-0.8	-0.1	0.3	0.4
George Brown	0.5	0.5	-0.8	-0.1	0.6
Georgian	-0.1	-0.4	0.2	0.5	0.4
Humber	-0.4	0.9	-0.4	-0.1	0.6
La Cité	-0.1	-0.1	0.6	0.1	0.3
Lambton	-0.1	0.2	0.3	0.2	0.2
Loyalist	0.2	-0.1	0.4	-0.3	0.3
Mohawk	-0.4	0.2	-0.9	0.1	0.5
Niagara	0.1	-0.2	0.6	-0.7	0.5
Northern	0.6	0.4	-0.3	0.1	0.4
Sault	-0.3	-0.6	0.5	-0.8	0.6
Seneca	0.2	0.1	-0.9	-0.5	0.5
Sheridan	-0.5	0.0	0.4	-0.2	0.4
St. Clair	-0.1	-0.1	0.3	-0.8	0.4
St. Lawrence	0.0	0.0	-0.2	0.5	0.3
<b>Standard Deviation</b>	<b>0.3</b>	<b>0.4</b>	<b>0.6</b>	<b>0.5</b>	<b>0.2</b>

Using our colour-coded scheme, there do not appear to be any strong patterns evident in the percentage of students in a degree or graduate-certificate program. Figure 26 shows the standard deviation across the four average standardized values of each dimension in order from the highest degree of variance (least balanced) to lowest (most balanced).

**Figure 26: Standard Deviation across the Four Dimensions**



We went on to examine whether any correlations exist across the dimensions. Table 4 presents the correlation coefficients between them. There is no correlation between equity of access and the other three dimensions. This should come as no surprise given that this dimension had the least amount of dispersion among the average standardized scores, suggesting that each college has its own strengths with regard to access. There is a weak negative correlation between the demand and demographics dimension and the learning journey dimension, and a moderate negative correlation between demand and demographics and graduate outcomes.

**Table 4: Correlation Coefficients between the Four Dimensions<sup>6</sup>**

	Equity of Access	Demand and Demographics	Learning Journey	Graduate Outcomes
Equity of Access				
Demand and Demographics	0.2			
Learning Journey	-0.1	-0.5		
Graduate Outcomes	0.0	-0.2	0.1	

Table 5 presents the correlation coefficients between the degree/graduate certificate intensity framework we employ, and our four dimensions of differentiation. The analysis demonstrates weak degrees of correlation; slightly negative for equity of access and learning journey, and slightly positive for demand and demographics. There is no correlation between degree/graduate certificate intensity and the graduate outcomes dimension.

**Table 5: Correlation Coefficients between Degree Intensity and the Four Dimensions**

	Correlation
Equity of Access	-0.3
Demand and Demographics	0.3
Learning Journey	-0.2
Graduate Outcomes	0.0

<sup>6</sup> Correlation coefficients measure how closely two sets of values move together. In our case, the two sets of values are the institutional dimension-level values for each possible pairing of dimensions. The results for each pairing are expressed as a number between -1 and 1 in Table 4. A positive correlation means that as one dimension's values grow, so do the values of the paired dimension. A negative correlation means that as one dimension's values grow, those of the paired dimension diminish. The closer the result is to either 1 or -1, the tighter the positive or negative relationship. The closer the result is to 0, the less a relationship exists at all between the values in the two dimensions.

## Observations from the Data

The following observations contextualize our thinking about differentiation among Ontario colleges. We encourage the institutions themselves, along with MAESD, to consider the implications of these trends during SMA discussions and other strategic sectoral and system-wide planning dialogues.

- For us, the most interesting lesson from this analysis is the degree of dispersion across the dimensions. The heat map (Table 2) is a visual indicator of the individuality or uniqueness of the colleges, with values sprinkled across the dimensions and little obvious clustering based on our credential-based sorting tool. The fact that there are few obvious patterns or areas of clustering among the colleges suggests that they are, in fact, quite individually differentiated even while they hold close values in terms of performance within the four dimensions. Correlations between the dimensions are moderate. The pinwheels (Figures 2–25) demonstrate the degree of well-roundedness among the institutions, and illustrate a fair degree of evenness in their strength among the four dimensions. Most of the wheels would, in fact, roll along the road, albeit with some bumps.<sup>7</sup>
- Ontario colleges are doing consistently well in terms of ensuring equity of access, with a very tight range in scores regardless of location or demographics, though each has its own strengths in terms of providing access to underrepresented groups. Canada has one of the highest shares of adults with a postsecondary credential as measured by the Organization for Economic Co-operation and Development; this is in large part due to high attainment rates at the college level (OECD, 2014).
- Ontario’s small, rural and northern colleges are quiet powerhouses, with a clustering at the high end of scores in the learning journey dimension, and overall positive performances in graduate outcomes. Given what we know about student-reported satisfaction at smaller institutions (it’s generally higher than that at larger institutions), the scores in the learning journey dimension aren’t surprising. The healthy graduate outcomes scores are a less obvious finding and deserve careful probing, especially in light of the fact that overall employment rates are lower in rural and northern regions than in urban centres. Are smaller institutions more closely tied to their local economies? Are they developing programs and producing graduates that are especially relevant to the local labour market? We know that college students are likely to attend an institution close to home;<sup>8</sup> do those in less urban areas start out their postsecondary journey with a more localized and, therefore, potentially more realistic idea of postgraduate job opportunities?

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<sup>7</sup> While our intention in this report is not to compare colleges to universities, it is worth noting that the same analysis on university data revealed much stronger correlations; in fact, HEQCO was able to group universities (into four clusters) based on strong relationships.

<sup>8</sup> For a detailed analysis of college enrolment and demographic patterns, see *College Sustainability: Signal Data* (Weingarten et al., 2017).

- Higher scores in the demand and demographics dimension are correlated with institutional location in the Greater Toronto Area (GTA). From our detailed look at demographics in [College Sustainability: Signal Data](#) (Weingarten et al., 2017), we know that the GTA is alone in expecting sustained trends in population growth in the traditional age-range of postsecondary students. As articulated in HEQCO’s earlier examination of college differentiation, the GTA-factor is an important consideration in understanding college differentiation from the perspective of the province and the student, as the demand for baccalaureate programming is particularly intense in that region.
- Once again, credential mix — particularly with regard to degrees and graduate certificates — has emerged as the most significant distinguishing feature in understanding both practical and strategic differentiation between the colleges. The institutions that are most active in the degree space, in particular, are at the top range of scores in the demand and demographics dimension, though this may have more to do with the fact that they are located in urban areas such as the GTA that are experiencing continuous demographic growth. There is also a slight concentration of these institutions near the bottom range of scores in both the learning journey and, notably, graduate outcomes; the system needs to ask hard questions about why this is the case.

## Conclusion

The province has signaled, through the release of its [Differentiation Policy Framework](#), the SMA exercise and small steps related to differentiated quality funding in the revised funding formulas, its intention to consider differentiation a “primary policy driver for the system” (MTCU, 2013, p. 6). Even with recent changes, however, the funding mechanism still disproportionately rewards enrolment growth. This is problematic because we know that enrolment growth is, for many institutions, increasingly unattainable.

As we have identified, the college sector already demonstrates elements of differentiation. We have grouped colleges based on credential mix for the purposes of framing our analysis of student success indicators, but one of the most interesting takeaways from this research is further evidence that colleges are *individually* differentiated (whereas universities can be more obviously sorted into categories).<sup>9</sup>

For colleges, characteristics of differentiation manifest locally; they are driven by geography, demographic demand for programming that affects credential mix and regional labour market requirements. This makes sense given the overall mission and mandate of the sector. We invite the institutions themselves, along with government, to consider what this means for students and society more generally and whether differentiated institutions, and the students they serve, are best served by a policy environment that still treats them essentially as identical.

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<sup>9</sup> See *University Differentiation* (Hicks & Jonker, 2016).

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## Appendix A: Dimensions of Differentiation — Revisited

Within the regional clusters and across the college sector as a whole, the first dimension we examined in our original paper (Hicks, Weingarten, Jonker & Liu, 2013) was the distribution of college programming by area of emphasis using the four main subject areas of Applied Arts, Business, Health and Technology. The data revealed some variation in the programmatic profiles of the colleges; in fact, some colleges trade heavily on their reputational standing with regard to key program offerings.<sup>10</sup> We have updated this analysis using data from 2016–17 and see a very similar distribution of results.

**Table A1: Program Mix by Field of Study — # of Standard Deviations from the System Average**

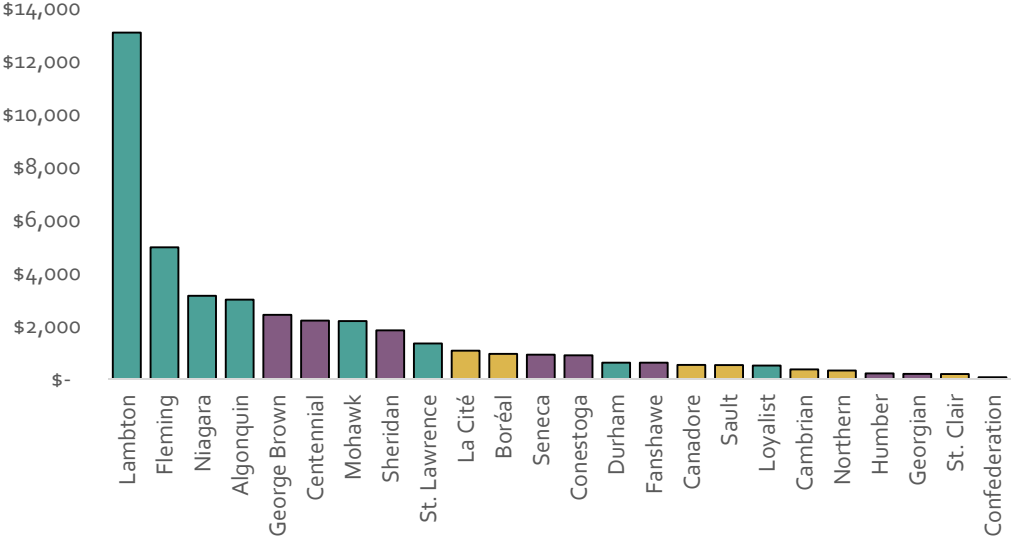
	Applied Arts	Business	Health	Technology
Algonquin	0.0	1.0	-0.6	-0.4
Boréal	-0.8	-1.0	2.3	-0.4
Cambrian	-0.2	-1.5	0.5	1.3
Canadore	0.8	-1.3	0.8	-0.4
Centennial	-0.9	0.0	0.4	0.5
Confederation	0.5	-0.4	0.0	0.0
Conestoga	-1.4	1.1	-0.4	0.7
Durham	0.0	0.3	-0.2	-0.1
Fanshawe	0.5	0.9	-0.5	-0.9
Fleming	-0.8	-0.8	-0.3	2.0
Georgian	-0.2	0.5	0.4	-0.7
George Brown	-0.8	1.9	-0.5	-0.6
Humber	1.1	1.0	-1.0	-1.2
La Cité	1.3	-0.4	-0.5	-0.5
Lambton	-1.3	-0.7	0.5	1.6
Loyalist	1.8	-0.9	-0.8	-0.1
Mohawk	-0.2	-0.2	-0.7	1.2
Niagara	0.8	0.4	-0.5	-0.7
Northern	-2.0	-0.9	3.1	-0.2
Sault	-0.3	-1.3	-0.4	2.1
Seneca	-0.4	2.2	-1.2	-0.6
Sheridan	1.9	0.3	-1.0	-1.2
St. Lawrence	0.8	0.2	0.4	-1.4
St. Clair	-0.2	-0.3	0.6	-0.1
<b>Average (2016–17)</b>	<b>42%</b>	<b>20%</b>	<b>14%</b>	<b>24%</b>
<b>Average (2011–12)</b>	<b>39%</b>	<b>26%</b>	<b>11%</b>	<b>25%</b>

Source: MAESD, 2016–17

<sup>10</sup> For example, computer animation at Sheridan, music at Humber, resource programming at Fleming.

Secondly, we reviewed the amount of research funding granted to Ontario colleges. Applied research is still a relatively new phenomenon in the college sector; just 3.2% of all funding from the Natural Sciences and Engineering Research Council of Canada (NSERC) distributed in Ontario was awarded to the college sector in 2016–17, compared to 2.7% in 2011–12. Our analysis has determined that there is no correlation between the percentage of domestic enrolment in degree and graduate-certificate programs (all students) and research funding per full-time college professor.

**Figure A1: NSERC Funding per Full-time Professor (three-year average)**



Source: NSERC search engine and CAAT Academic Workload Survey. NSERC funding per full-time professor is based on a three-year average for 2013–14, 2014–15 and 2015–16.

Finally, degree granting was identified as an important new and somewhat volatile dimension of differentiation. We considered degree granting in two ways; first, we simply identified whether or not an institution had chosen to offer bachelor’s degrees. Some colleges have embraced degree programming heavily (Humber, Seneca, George Brown, Algonquin), while others have opted not to offer degrees or are proceeding much more cautiously. Secondly, we considered degree granting as a sort of proxy for institutional orientation and purpose, noting that in order to offer quality degree programs, colleges must expand upon the traditional two- and three-year diploma market and mindset, which is the bedrock of the system. Figure 1 in the main report shows the current picture with regard to domestic participation in degree granting at Ontario colleges.

## Appendix B: Assembling the Dimensions

This appendix presents the source data behind the four dimensions of differentiation defined in this report:

- Equity of access
- Demand and demographics
- Learning journey
- Graduate outcomes

The indicator data is not used to assign a performance score to the colleges. Rather, we are using the indicators and their associated dimensions as descriptive tools to understand how the institutions differ from one another. It is important to note that some of the indicators of differentiation — demographics and demand, for example — fall outside the control of the institution.

We view this data as measures, not values. Reporting “more” of any given indicator is not a judgment of value or performance. For example, to say that one college has a higher percentage of first-generation students in its population than the system average does not imply that it is more equitable in terms of access. These dimensions report facts we believe are relevant to institutional and system planning with regard to differentiation. This is not a performance ranking.

### Dimension 1.0: Equity of Access

The Ontario Colleges of Applied Arts and Technology (CAATs) were created in 1967 in large part as access institutions to serve their local communities. Colleges provide local access to high quality postsecondary education and training to students for whom traditional theoretical study at university may not be a good fit. In Ontario, access to higher education involves not only providing more opportunities for Ontarians to study at the postsecondary level, but also ensuring equity of access for students from all backgrounds. The government has identified the following equity of access priorities: first-generation students, students with disabilities, Indigenous and Francophone students, those from low-income families, and students transferring between college and university.

The equity of access dimension is comprised of the following indicators, which reflect considerable diversity of focus and profile among the 24 colleges with regard to these priorities:

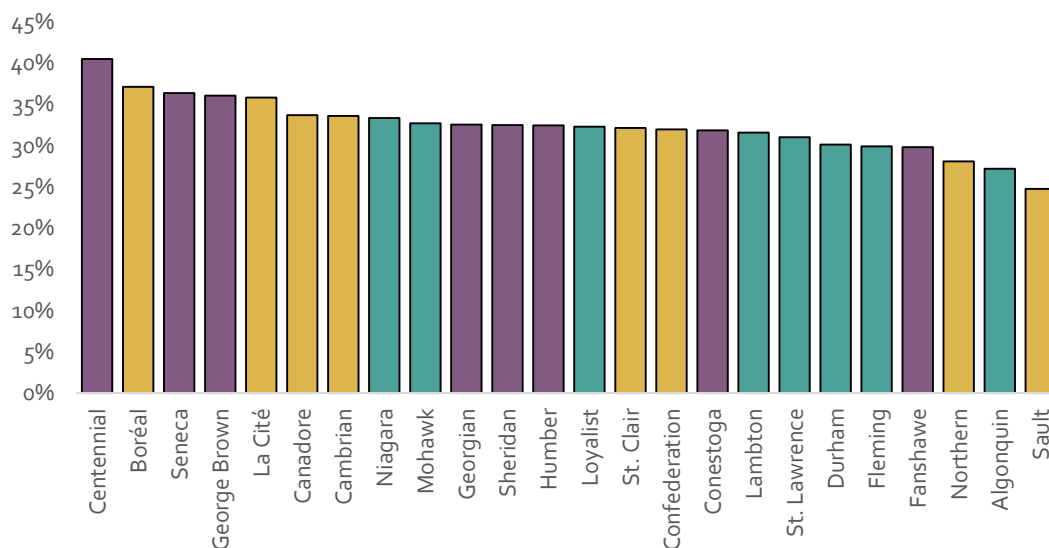
- 1.1 % First-generation students
- 1.2 % Aboriginal students
- 1.3 % Students with a disability
- 1.4 % Francophone students
- 1.5 OSAP participation rate
- 1.6 % Part-time students
- 1.7 % Students aged 25 +
- 1.8 % Students who delayed entry to college after high school
- 1.9 % Students with prior PSE
- 1.10 College-to-university mobility rate

## Indicator 1.1: Percentage of Students who are the First Generation in their Family to Pursue Postsecondary

Our first indicator shows the percentage of students from each college whose parents did not pursue postsecondary education. Since this was identified in the 2005 Rae Report as an access priority for the Ontario postsecondary sector, the government has been supporting first-generation scholars with targeted funding. The priority placed on first-generation students is based on research that indicates that the probability of attending postsecondary is considerably lower for children of parents who do not themselves have a postsecondary education (Zhao, 2012).

Figure 1.1 shows the percentage of students at each public college who self-identify as first generation. The data was self-reported by students on the provincially mandated Key Performance Indicator (KPI) Student Satisfaction and Engagement Survey.<sup>11</sup> Though administration of the survey is mandatory for institutions, participation is voluntary and results may reflect an unmeasurable degree of self-selection bias. The overall response rate for the survey in 2016–17 was 60.7%.

**Figure 1.1: Percentage of Students who are First-generation Students**



Source: MAESD — KPI Student Satisfaction and Engagement Survey, 2016–17

<sup>11</sup> The Student Satisfaction and Engagement Survey has been conducted at Ontario's 24 public colleges since 1998 at the behest of the government. Student satisfaction is one of five key performance indicators collected through the use of two annual surveys, one of which is the Student Satisfaction and Engagement Survey. It is conducted in class each February. The survey is administered to all full-time students who are not in the first semester of their program.

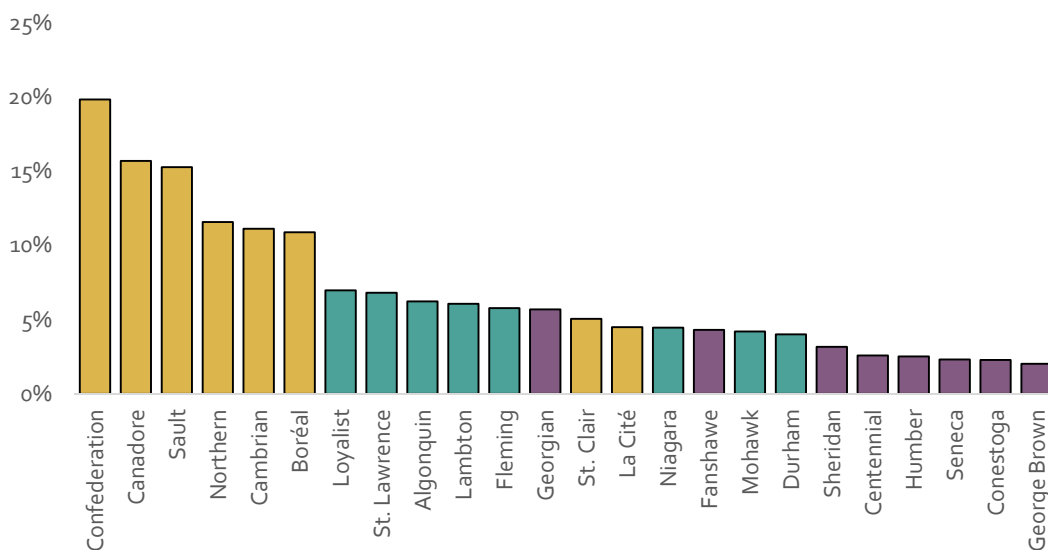
## Indicator 1.2: Percentage of Students who are Aboriginal

The development and implementation by MAESD (previously known as the Ministry of Training, Colleges and Universities, or MTCU) of the Aboriginal Postsecondary Education and Training Policy Framework (MTCU, 2011) signal the Ministry's commitment to support postsecondary education for Ontario's Indigenous population. The recent report of the Truth and Reconciliation Commission of Canada calls for the elimination of gaps in Indigenous educational attainment (Truth and Reconciliation Commission, 2015). The gap between Indigenous and non-Indigenous educational attainment is highest at the university level, and much narrower at the college and trades levels (Gordon & White, 2013).

It is not surprising that geographic location plays a role in the distribution of Indigenous students at Ontario colleges. In *College Sustainability: Signal Data* (Weingarten, Kaufman, Jonker & Hicks, 2017), HEQCO demonstrated that student enrolment at Ontario colleges draws heavily from the institution's home region. Thus, institutions operating in regions with proportionally higher Indigenous populations tend to enrol higher proportions of Indigenous students. This statement bears out with regard to colleges adjacent to Indigenous communities, such as Confederation, Canadore and Sault.

Figure 1.2 shows the percentage of full-time students at each public college who identified as Aboriginal on MAESD's KPI Student Satisfaction and Engagement Survey.

**Figure 1.2: Percentage of Students who are Aboriginal**



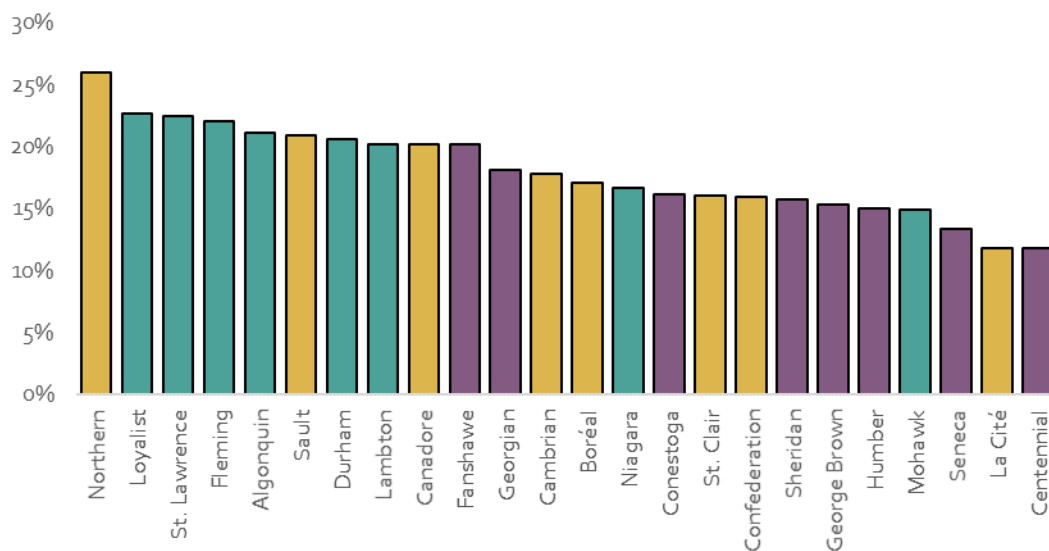
Source: MAESD — KPI Student Satisfaction and Engagement Survey, 2016–17

### Indicator 1.3: Percentage of Students with a Disability

Providing access to postsecondary education for students with a disability — as well as appropriate accommodations — is a legislative requirement for institutions. Ensuring equity of access for Ontarians with a disability is also a policy priority for the government. Ontario distributes dedicated funding to help defray the additional costs associated with serving students with special needs.

Figure 1.3 shows the percentage of full-time students at each college in Ontario who self-reported as having a disability on MAESD’s KPI Student Satisfaction and Engagement Survey. No doubt there are many other students who may have been diagnosed or self-identify as having a disability but preferred not to disclose it when filling out the survey.

**Figure 1.3: Percentage of Students with a Disability**



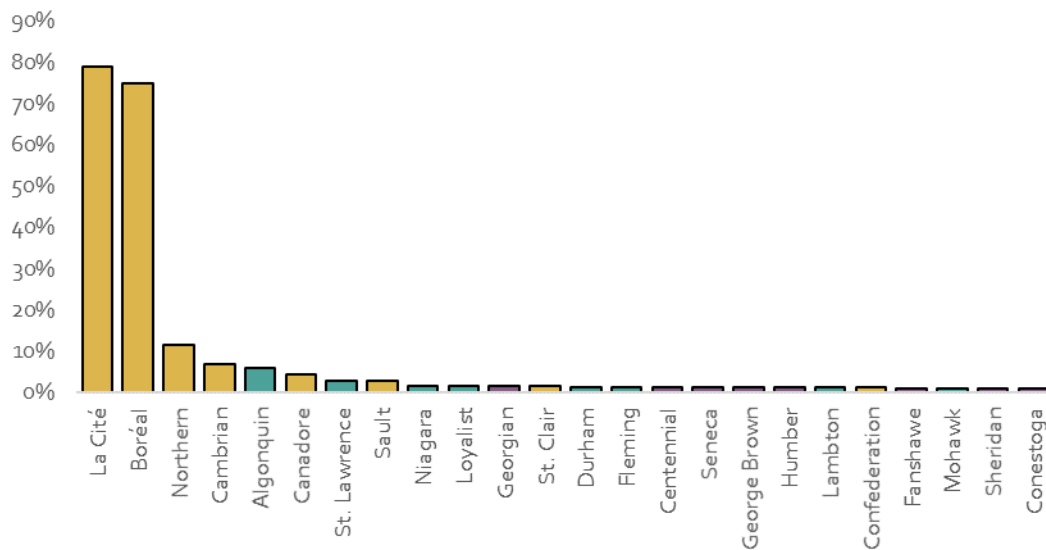
Source: MAESD — KPI Student Satisfaction and Engagement Survey, 2016–17

### Indicator 1.4: Percentage of Students with French as a First Language

As an example of a differentiated policy and funding practice within Ontario’s college sector, the government has concentrated French-language programming at two institutions in the province (La Cité and Boréal). These two institutions have exclusive jurisdiction to offer programs and services in French within Ontario’s public college system.<sup>12</sup> All funding received from the provincial government supports French academic delivery.

The corresponding proportion of students whose first language is French is shown in Figure 1.4.

**Figure 1.4: Percentage of Students with French as a First Language**



Source: MAESD — KPI Student Satisfaction and Engagement Survey, 2016–17

<sup>12</sup> Ontario Colleges of Applied Arts and Technology Act, 2002. Ontario Regulation 34/03. <https://www.ontario.ca/laws/regulation/030034>

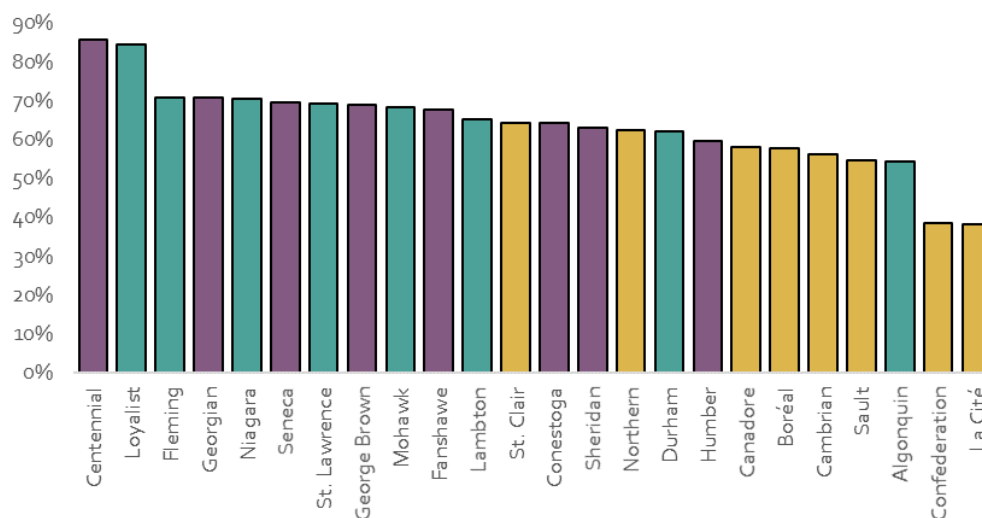
### Indicator 1.5: OSAP Participation Rate

Ensuring that a lack of financial resources does not prevent potential students from attending postsecondary is a long-standing policy priority for Ontario. In changes to the Ontario Student Assistance Program (OSAP) announced in early 2016, the province has committed to providing free tuition to students from families with a combined income of less than \$50,000 per year. Through a combination of grants and loans, no prospective postsecondary student in Ontario should be priced out of a higher education due to fees.

Because OSAP is a needs-based program, participation serves as a proxy for socioeconomic status. It is an imperfect proxy, influenced by factors such as the proportion of each institution's student body living at home (with associated lower living costs) and program mix (variability in tuition fees). As well, not all low-income OSAP-eligible students apply for assistance under the program (Berger, Motte & Parkin, 2009, p. 159). OSAP also extends income-tested eligibility to the middle class (Ontario Ministry of Finance, 2016). It is, however, the best available related metric we have at the institutional level. An alternative approach would be to map applicants and students at each institution to neighbourhood-based census data on family income (see, for example, Dooley, Payne & Robb, 2009). This institutional-level data was not available to us but would make for an interesting future project.

Figure 1.5 shows the OSAP participation rate for students at each Ontario college. It is based on the total number of OSAP awards issued to full-time students in 2015–16 divided by fall 2015 full-time enrolment. The rates have been adjusted to exclude recipients of the 30% Off Ontario Tuition grant who applied using the stand-alone application to be considered only for this grant.

**Figure 1.5: OSAP Participation Rate**



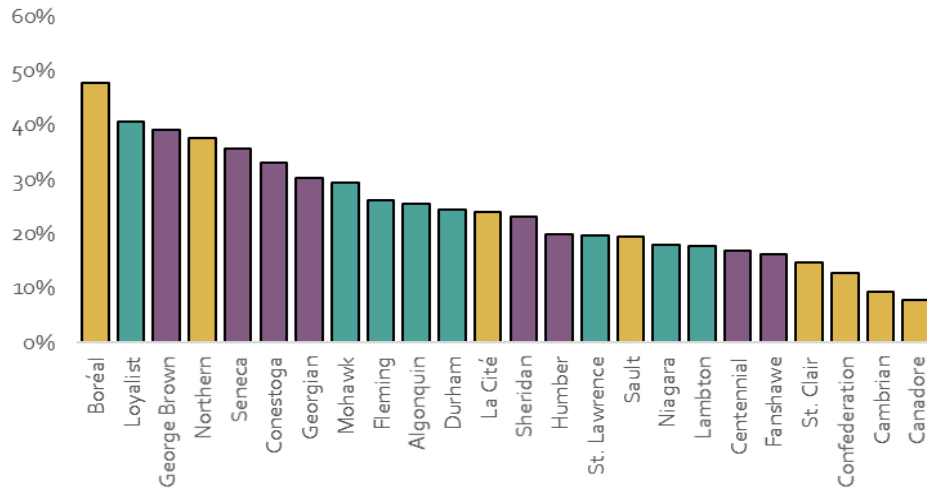
Source: MAESD, 2015–16



### Indicator 1.6: Percentage of Students Studying Part-time

Another general indicator of access is the proportion of students who are studying part-time, perhaps because they need to work or are balancing other obligations along with their studies. Figure 1.6 shows the percentage of students at each college who are studying on a part-time basis, based on headcount enrolments for funding-eligible and international students.

**Figure 1.6: Percentage of Students Studying Part-time**

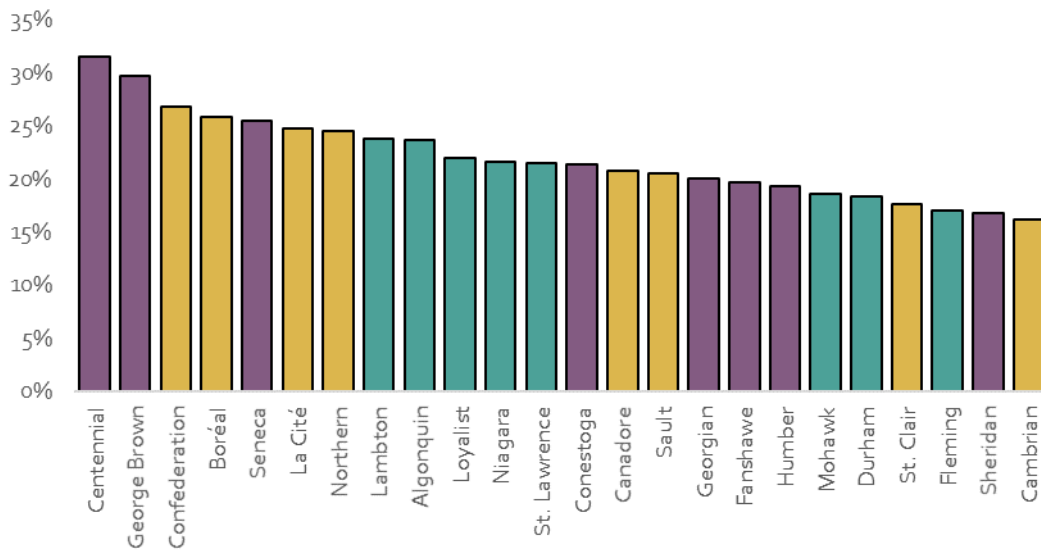


Source: MAESD, 2016–17

### Indicator 1.7: Percentage of Students Aged 25 and Older

Ontario colleges were intended to increase access to postsecondary education for students of all ages and backgrounds. Thus, the number of students aged 25 and older is an indicator used in the college sector to underscore the prevalence of non-traditional learners in the system. Figure 1.7 shows the percentage of students at each college who are considered mature. Unfortunately, this data includes only those studying full-time. This is a huge limitation given the likelihood that many mature college students are, in fact, studying part-time in order to accommodate family, career and other responsibilities.

**Figure 1.7: Percentage of Students Aged 25 and Older**

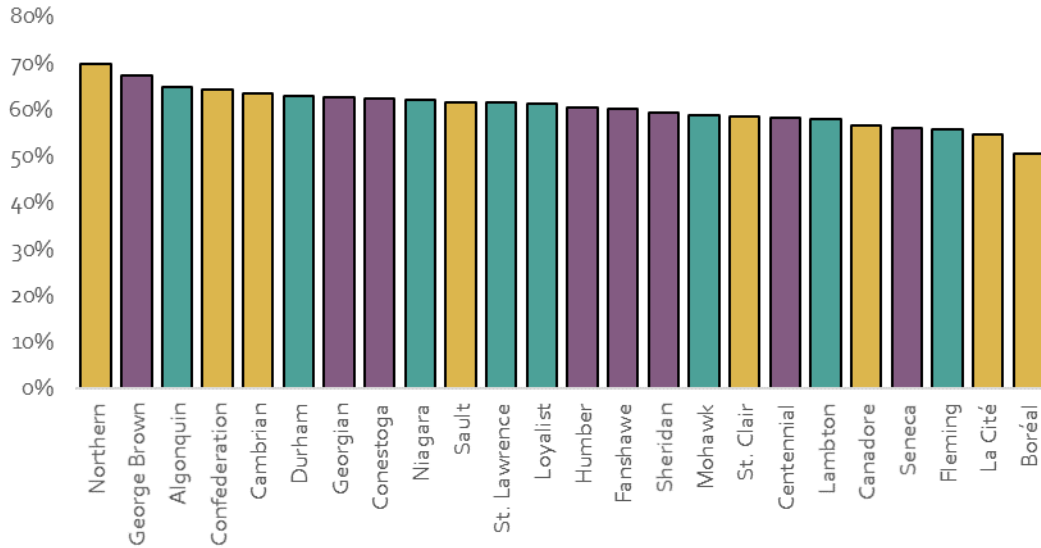


Source: MAESD, 2016–17

### Indicator 1.8: Percentage of Students who Delayed Entry to College after High School

Further to the previous indicator, Figure 1.8 shows the percentage of students who delayed entry to college after high school. This group of learners is large and growing in proportion in the college sector. In 2016–17, 71% of applicants did not apply directly from high school, up from 60.5% in 2007–08 (Colleges Ontario, 2017).

**Figure 1.8: Percentage of Students who Delayed Entry to College after High School**



Source: OCAS, 2015–16

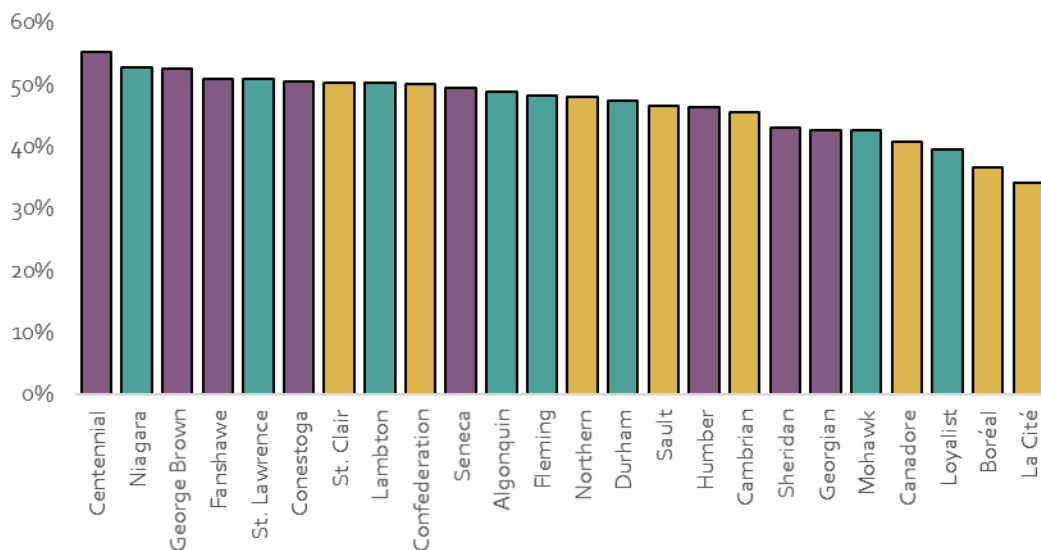
### Indicator 1.9: Percentage of Students with Prior PSE

Given the number of college students who are over the age of 25 and/or did not enrol directly after graduation from high school, it is not surprising that a significant percentage of Ontario college students report that they already possess some postsecondary education.

Figure 1.9 demonstrates the percentage of enrolled students who indicated that they have attended some kind of postsecondary prior to enrolling at their current institution.

HEQCO and others would like to know more about these students and their postsecondary journeys. To that end, we encourage the expanded use of the Ontario Education Number (OEN), a powerful unique identifier attached to each student's education record beginning in kindergarten. Broader access to de-identified OEN data would provide a reliable, complete picture of student educational patterns, including a complete and accurate record of prior postsecondary experience of incoming students.

**Figure 1.9: Percentage of Students with Prior PSE**



Source: MAESD — KPI Student Satisfaction and Engagement Survey, 2016–17

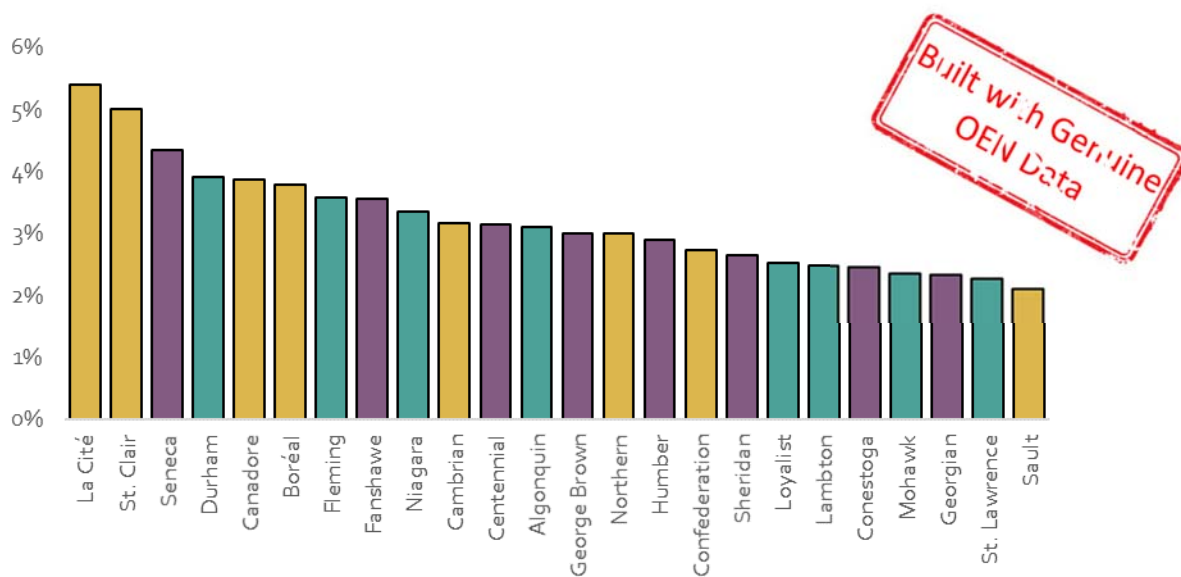
## Indicator 1.10: College-to-University Mobility Rate

While our other access indicators examine the journey to college, an equally important priority is the ability of college students to move to university, should they wish to do so. The province has placed considerable focus on “transfer” (credits, programs, pathways), with a special emphasis on college-to-university transfer.

MAESD has developed a software tool called Open SIMS (Student Information Management System), which holds a wealth of data about Ontario postsecondary students. The system monitors student mobility using the OEN. HEQCO has worked closely with the Open SIMS team at MAESD and this report marks the initial publication of OEN data in the higher-education space. Further exploration of OEN data (using the Open SIMS tool) will contribute to a better understanding of trends in student mobility and will enrich our study of differentiation within the sector and across the system as a whole.

The analysis below presents the mobility rate of students from Ontario colleges to Ontario universities. Mobility is a broader concept than transfer — we are capturing, as a percentage of enrolment, all students whose primary enrolment was at a college prior to 2015–16, and whose primary enrolment was at a university in 2015–16. There is no further disaggregation into the nature of that mobility. In future collaborations with MAESD, we hope to look more closely at the types of movements students are making (e.g., before or after graduation; with or without credit transfer; within a planned collaborative program pathway or on their own).

**Figure 1.10: College-to-University Mobility Rate**



Source: MAESD, 2015–16.<sup>13</sup>

<sup>13</sup> Represents the number of students whose primary status in 2012–13, 2013–14 and/or 2014–15 was enrolment (in any program and credential) at an Ontario college, and whose primary status in 2015–16 was enrolment (in any program and credential) at any Ontario university, expressed as a percentage of each college's 2014–15 enrolment.

## **Dimension 2.0 Demand and Demographics**

Understanding the how and why of student decisions around acceptance and enrolment is as much an art as a science. Students typically apply to more than one postsecondary program (either at the same institution or at different ones) and often receive multiple offers of admission. Within the context of the public college commitment to access, however, and the currently depressed demographic profile in much of the province, who really chooses whom?

We have already investigated one consequence of this two-way selection process in our consideration of equity-of-access indicators. The next section of this paper asks more generally whether some colleges are simply in higher demand among prospective students than others.

The demand and demographics dimension consists of the following indicators:

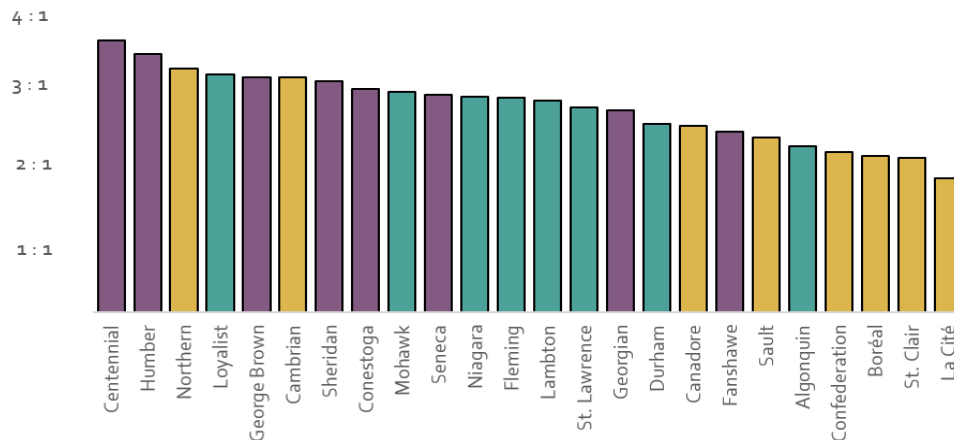
- 2.1** Applicant-to-registrant ratio
- 2.2** First choice
- 2.3** % International students
- 2.4** % Ontarians from home region

## Indicators 2.1 and 2.2: Applicant-to-Registrant Ratio, and the Ratio of First-choice Applicants to First-year Enrolment

The Ontario College Application Service (OCAS) is a centralized application clearinghouse for all 24 public colleges. Prospective students select the institutions to which they want to apply; if they choose to apply to more than one institution, their choices are rank-ordered.

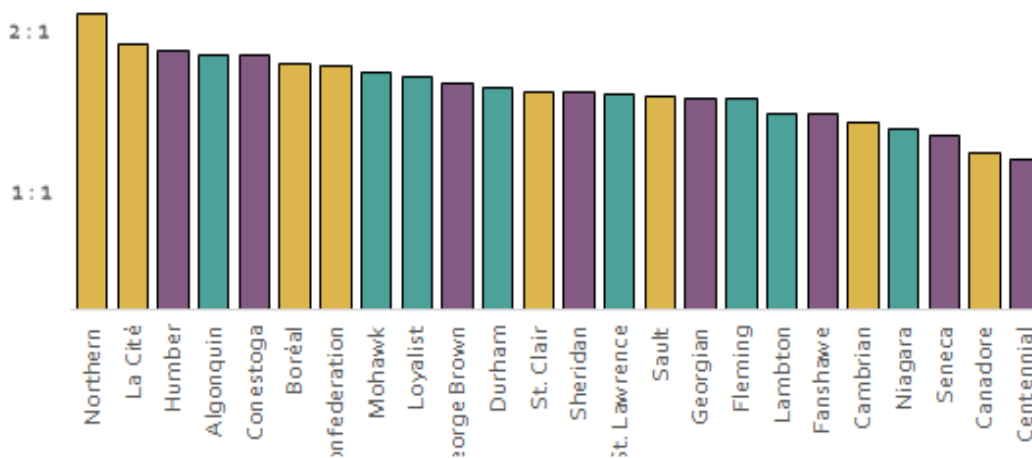
OCAS data allows us to consider the ratio of unique applicants to registrants for each college, as well as the ratio of first-choice applicants to first-year enrolment.<sup>14</sup> Figures 2.1 and 2.2 do just that.

**Figure 2.1: Applicant-to-Registrant Ratio**



Source: OCAS, 2015–16

**Figure 2.2: Ratio of First-choice Applicants to First-year Enrolment**



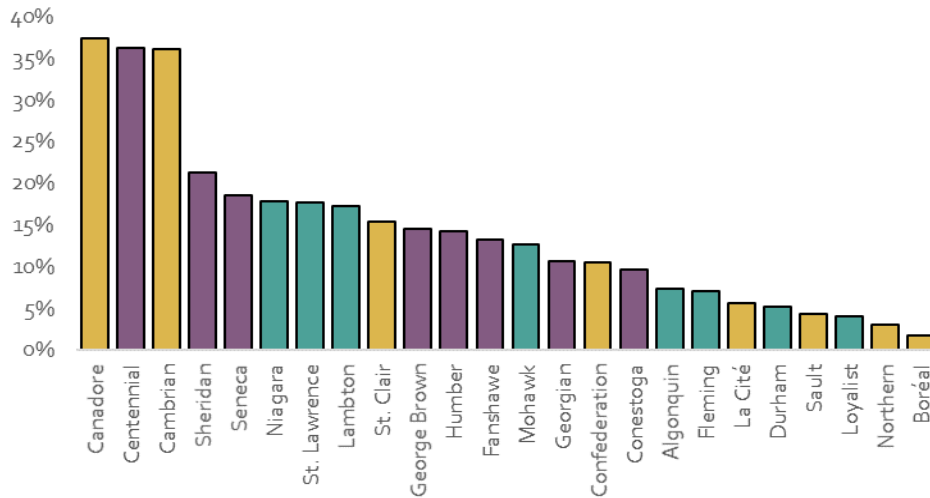
Source: OCAS and MAESD, 2015–16

<sup>14</sup> Ideally, we would have compared first-choice applicants for each college to total applicants to that college. However, we did not have access to the data needed to calculate this ratio.

### Indicator 2.3: Percentage of International Students

It is noteworthy that Ontario colleges are enrolling ever increasing numbers of international students. While international enrolment trends are heavily influenced by institutional policies around the recruitment of and support strategies for international students, it seems safe to assume that these students make the effort to come here because they believe the opportunities are worth the costs. Figure 2.3 shows the proportion of the student population at each college that is made up of international students.

**Figure 2.3 shows the proportion of the student population at each college that is made up of international students.**



Source: MAESD, 2016–17

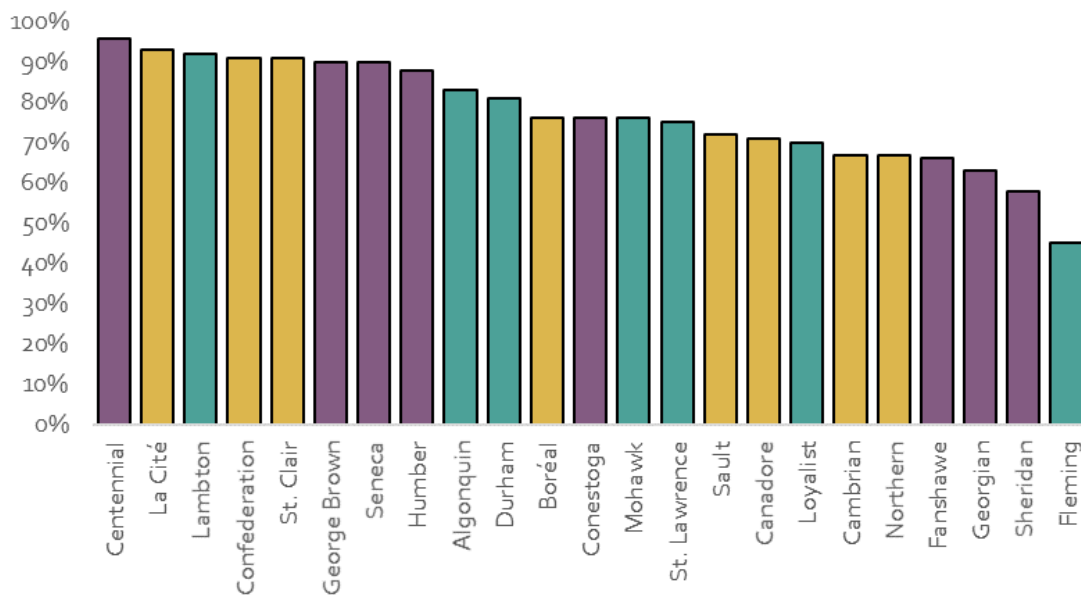


## Indicator 2.4: Percentage of First-year Ontario Students from their Home Region

As indicated in *College Sustainability: Signal Data* (Weingarten et al., 2017), Ontario’s public colleges — originally conceived of as community colleges — are tied very closely to their local environment both in terms of traditional (now informal) catchment areas for potential students, and program development as influenced by regional employment trends. Our analysis revealed that just over 80% of first-year Ontario students live in the same provincial region as their college campus — nearly half from the same municipality. As such, Ontario’s public colleges are still deeply rooted in their local communities.

Figure 2.4 shows the percentage of first-year Ontario students studying at a college in their home region.

**Figure 2.4: Percentage of First-year Ontario Students from their Home Region**



Source: MAESD, 2015–16

Niagara did not report complete postal code records to MAESD and is, therefore, not included in the above figure.

### **Dimension 3.0: Learning Journey**

Once the application and admissions phases are complete, there is a shift in focus on the part of both the student and the institution to engagement, belonging and academic achievement. Students have multi-pronged expectations of their postsecondary education — to develop skills and networks, to expand their knowledge, to get a job — and they want the costs of the experience (and any resulting debt load) to be both fair and manageable.

The next section of this report considers what we know about the student’s learning journey. We look at measured differences between colleges by indicators of progress, student experience and outcomes.

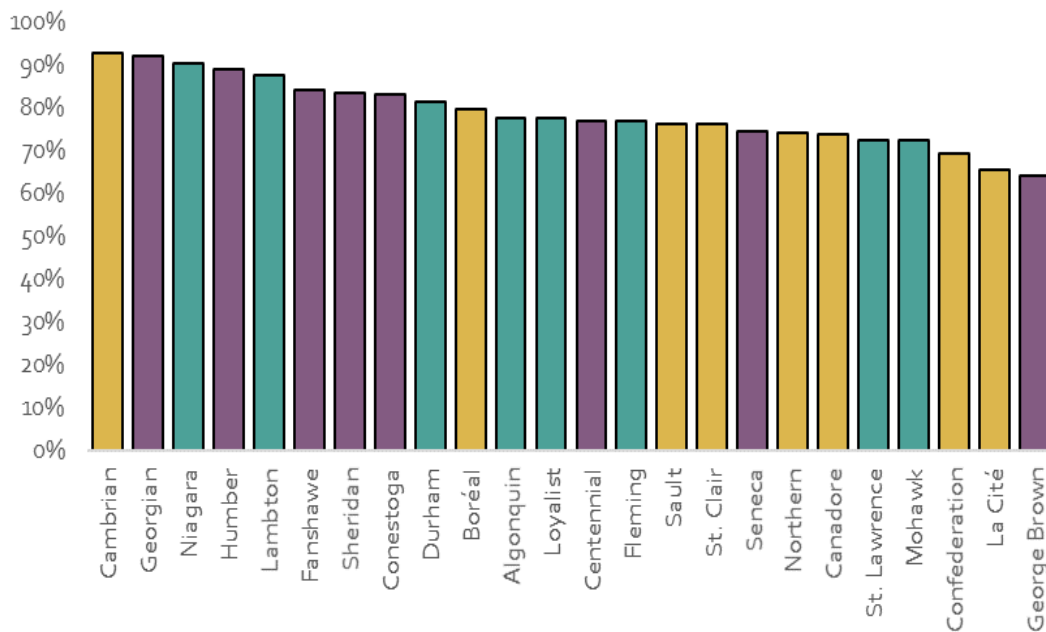
The learning journey dimension consists of the following indicators:

- 3.1** Retention rate
- 3.2** Graduation rate
- 3.3** Average class size
- 3.4** % Students with WIL
- 3.5** % Students who were satisfied

### Indicators 3.1 and 3.2: Retention and Graduation Rates

Our capacity to fully capture retention, progression and graduation rates in Ontario will be improved as we harness the potential of the OEN, which will enable us to track students across time and programs, and between institutions.<sup>15</sup> Nevertheless, we have a solid head start by way of tested measures of retention and graduation at the intra-institutional level through existing reporting mechanisms. Figure 3.1 shows the retention rate of undergraduate students from first to second year and Figure 3.2 shows institutional graduation rates.

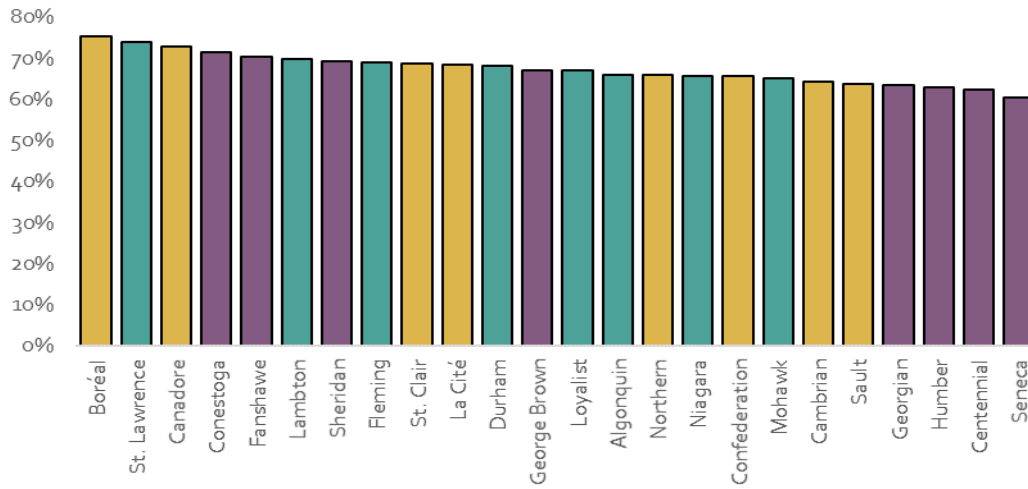
**Figure 3.1: Retention Rate from First to Second Year**



Source: Multi-year Accountability Agreements, 2013–14

<sup>15</sup> The Ontario Education Number is a unique student identifier. It has been issued to Ontario elementary and secondary students since 2003. The OEN was extended to all colleges and universities beginning in 2012. Once an OEN is assigned to an individual, it travels with the individual and therefore enables the creation of a longitudinal picture of all steps in the educational journey. As of the time of writing, there are three years of postsecondary OEN data collected, but no analysis has been released.

**Figure 3.2: Graduation Rate**



Source: MAESD, 2016–17

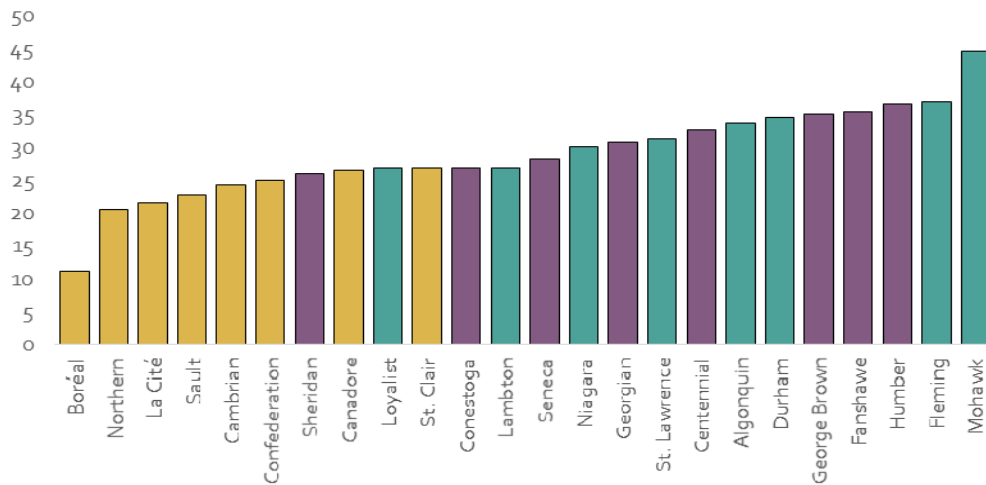
Note: Graduation rate is based on students who started one-year programs in 2014–15, two-year programs in 2012–13, three-year programs in 2010–11, and four-year programs in 2009–10, and who had graduated by 2015–16.

### Indicator 3.3: Average Class Size

Larger classes are one of the adaptations used by Ontario postsecondary institutions to accommodate increasing enrolment within the current economic climate. Ontario colleges have a history of smaller class sizes than universities due to the applied nature of much of the material.

Figure 3.3 reports the average class size by college.

**Figure 3.3: Average Class Size**

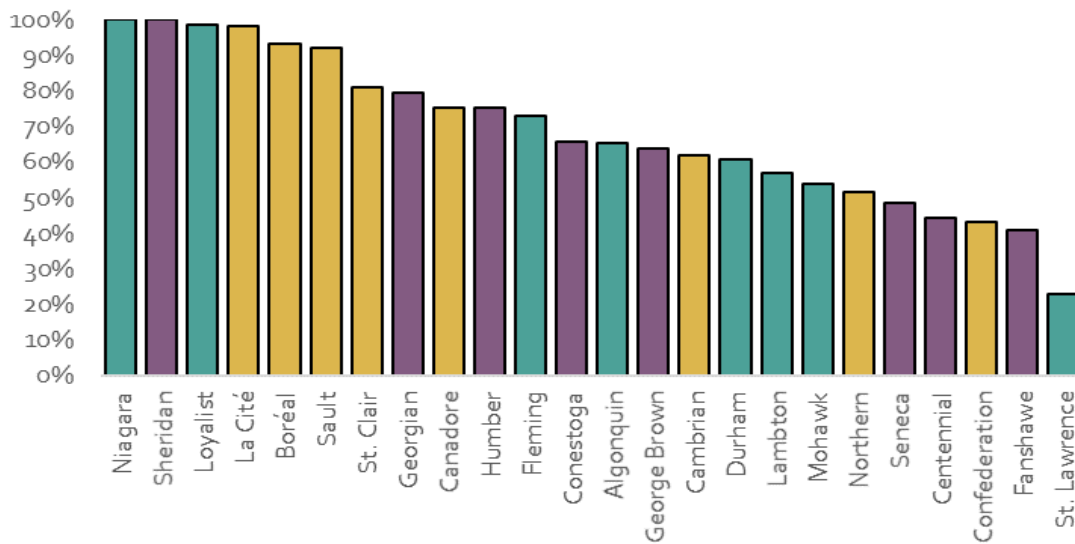


Source: CAAT Academic Workload Survey, 2015–16

### Indicator 3.4: Percentage of Graduates in Programs with Work Integrated Learning

A fundamental difference between the kind of education offered at Ontario colleges and universities is a focus on hands-on skills development, an industry-focused curriculum and opportunities for work integrated learning in the college sector. Students are attracted to college programs because they are grounded in practice, as are employers looking for recent grads. It is important, then, to have a sense of the amount of experiential learning conducted at Ontario colleges. Figure 3.4 shows the percentage of graduates in programs with a work integrated learning (WIL) component considered integral to the program.

**Figure 3.4: Percentage of Graduates in Programs with WIL**

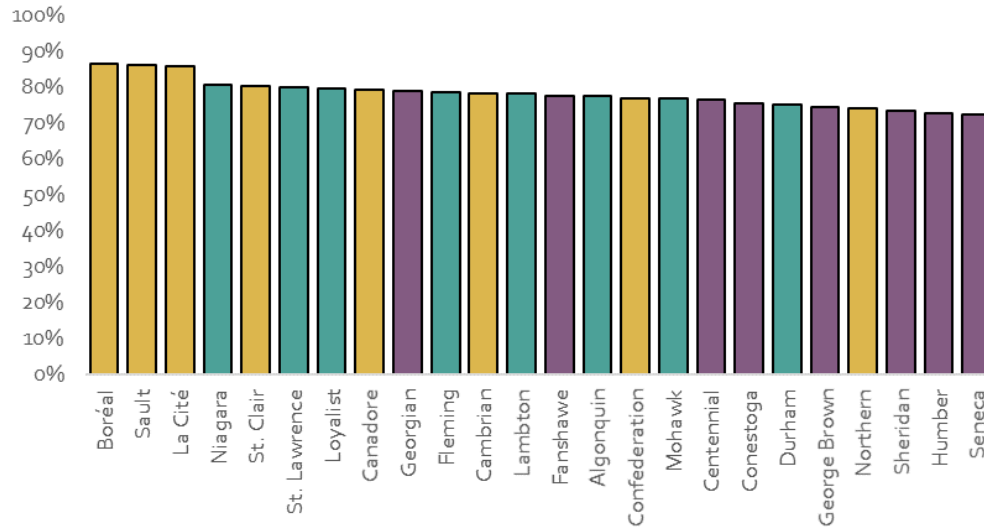


Source: MAESD — Graduate KPI Survey, survey of 2015–16 graduates six months after graduation. WIL information is provided by the institutions when assembling the graduate file; it is not a survey question asked of graduates.

### Indicator 3.5: Percentage of Students who were Satisfied with their College Experience

Figure 3.5 shows the student satisfaction rate, based on the average of four capstone questions included in MAESD’s KPI Student Satisfaction and Engagement Survey. The capstone questions gauge the student’s perception of the overall quality of the learning experience in his or her program, the overall quality of the college services, the overall quality of the facilities/resources, and whether the program provided the knowledge and skills that will be useful in a future career.

**Figure 3.5: Student Satisfaction Rate**



Source: MAESD — KPI Student Satisfaction and Engagement Survey, 2016–17

## Dimension 4.0: Graduate Outcomes

We know that students consider success in the labour market to be an important consideration in terms of a return for investing time and money in a postsecondary education. The University/College Applicant Study (UCAS) has been surveying applicants for almost 20 years to understand why and how students make decisions related to postsecondary education. Top among the 10 key decision factors for Ontario college applicants is the perception that graduates get high quality jobs.<sup>16</sup>

This section of our report — the graduate outcomes dimension — looks at variations between institutions in indicators related to graduate employment, earnings and satisfaction, which are compiled using data from surveys of graduates and employers conducted six months after graduation (the graduate and employer KPI surveys):<sup>17</sup>

- 4.1** Graduate employment rate
- 4.2** Graduate average earnings
- 4.3** Graduate job relatedness
- 4.4** Employer satisfaction rate
- 4.5** Loan default rate

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<sup>16</sup> *University/College Applicant Study: 2015 Final Report*. Colleges Ontario (November 2016) accessed 18 July, 2017: [http://www.collegesontario.org/research/external-reports/2016%20UCAS\\_Summary.pdf](http://www.collegesontario.org/research/external-reports/2016%20UCAS_Summary.pdf)

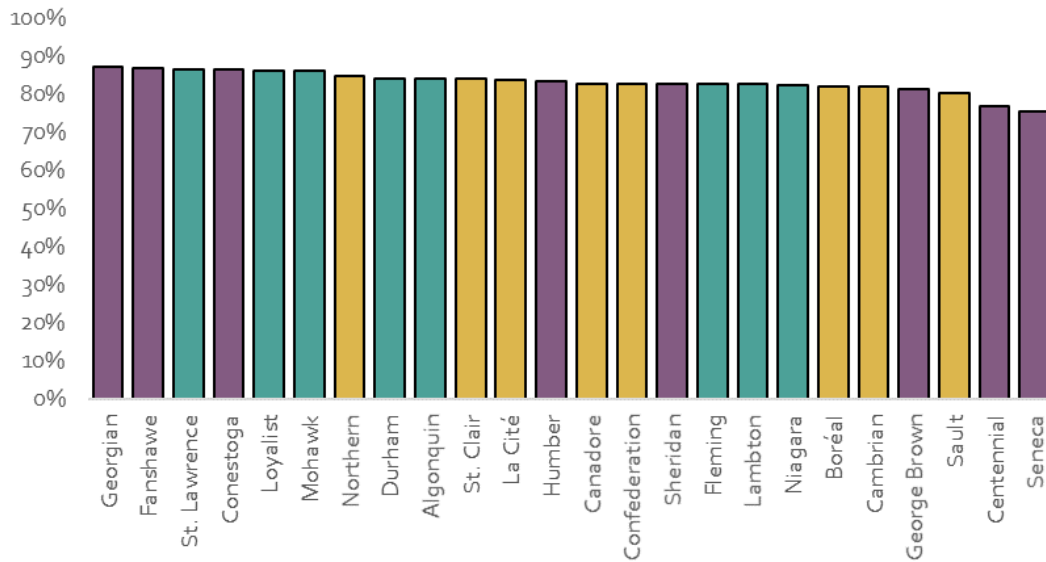
<sup>17</sup> The KPI Graduate Employment Survey is conducted six months after graduation by a third-party research firm contracted by the Ontario government. Graduates are contacted by phone and asked to participate. In addition to the obvious self-selection bias, information about employment (and contact details for employers) are self-reported. This data is valuable and is the only source we have to understand the immediate postgraduate fortunes of college graduates, but it must be understood in the light of these caveats.



### Indicator 4.1: Graduate Employment Rate

Figure 4.1 shows the employment rate of Ontario college graduates by institution six months after program completion. The employment rate is calculated only for those graduates who identify as being in the labour market and is, therefore, not impacted by those graduates who may have moved on to further study.

**Figure 4.1: Graduate Employment Rate**

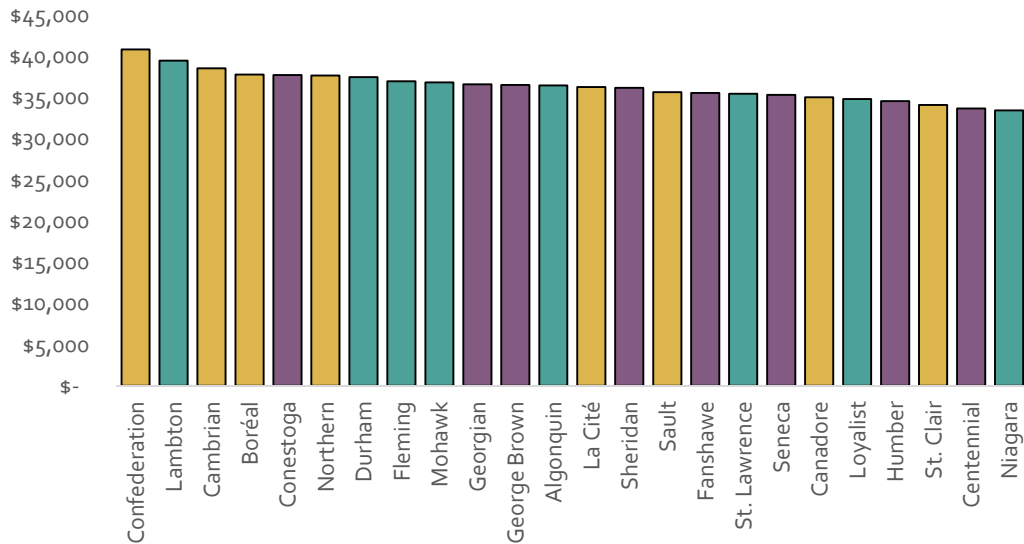


Source: MAESD — Graduate KPI Survey, survey of 2015–16 graduates six months after graduation

## Indicator 4.2: Average Earnings of Graduates

Figure 4.2 shows the average earnings reported by graduates working full-time. There is keen interest within the sector to learn more about the outcomes of postsecondary graduates; HEQCO and others are funding research that will provide more robust, long-term data on graduate employment earnings by matching graduates with their post-graduation income tax returns.<sup>18</sup>

**Figure 4.2: Average Earnings of Graduates**



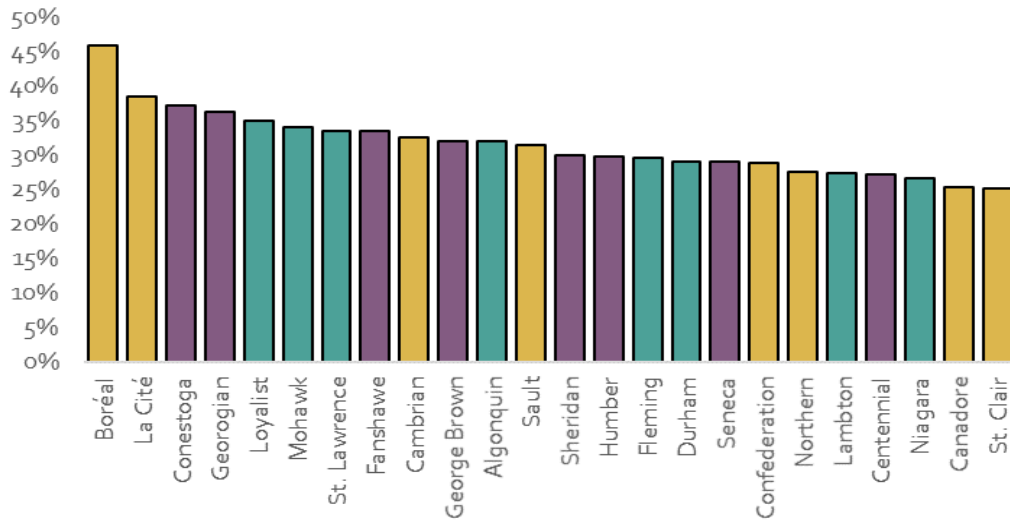
Source: MAESD — Graduate KPI Survey, survey of 2015–16 graduates six months after graduation

<sup>18</sup> For a preview of what will be possible, see the work done by the Education Policy Research Initiative at the University of Ottawa at <http://www.epri.ca/>.

### Indicator: 4.3: Graduate Employment in a Related Field

Of course, colleges don't just want their graduates to get jobs. They want their grads to find good jobs in a field related to their program of study. Figure 4.3 shows the percentage of college graduates who indicated that they were working in a full-time job that is directly related to their course of study.

**Figure 4.3: Graduate Employment in a Related Field**

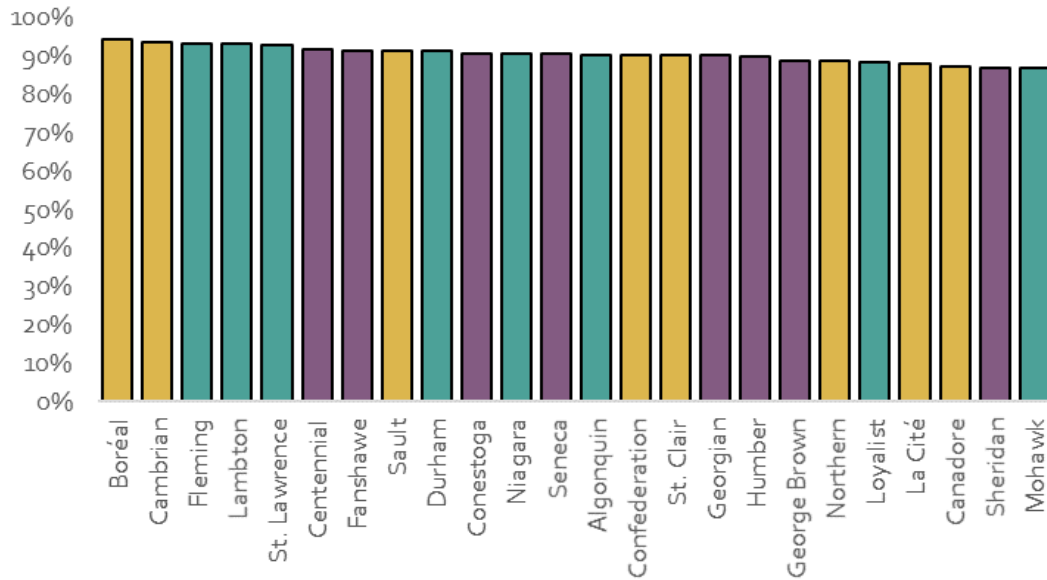


Source: MAESD — Graduate KPI Survey, survey of 2015–16 graduates six months after graduation

#### Indicator 4.4: Employer Satisfaction Rate

Gleaned from the Employer Satisfaction Survey — undertaken by a third party six months after graduation — Figure 4.4 shows the satisfaction rate of those who employ recent college grads. In order to smooth out the year-to-year fluctuations caused by the varied sample sizes, this table represents a three-year average of employer satisfaction rates.

**Figure 4.4: Percentage of Employers who were Satisfied with the College Graduates They Hired Six Months after Graduation**

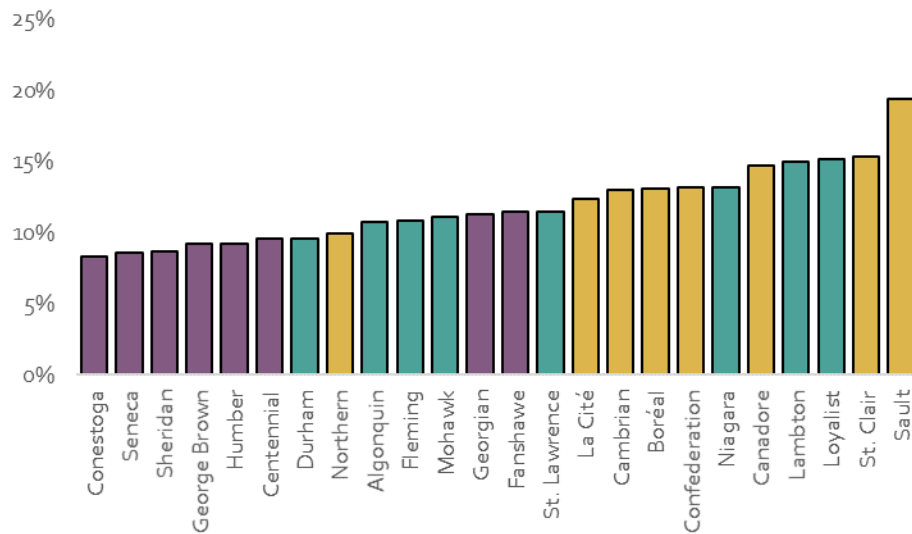


Source: MAESD — Employer KPI Survey, survey of employers who hired 2013–14, 2014–15, and 2015–16 college graduates

#### Indicator 4.5: Loan Default Rate

The manageability of student debt loads within the context of postgraduate earnings is an important component of understanding the student experience of postsecondary and the early career stage.<sup>19</sup> In the absence of other data, we have chosen to use the loan default rate calculated by the provincial government for the purpose of revealing differences in the outcomes of college graduates from various institutions, although admittedly it is a proxy indicator.

**Figure 4.5: Canada-Ontario Integrated Student Loan Default Rate**



Source: MAESD, 2015–16

<sup>19</sup> There are several ways to measure this indicator: overall loan levels at graduation; the rate of repayment; debt as a percentage of postgraduate income; educational debt versus consumer and other debt; the impact of loan forgiveness and relief measures, some of which are geared to income; or the impact of debt repayment on the overall multi-year return on investment from a postsecondary education.