



**THE DIVERSITY OF ONTARIO'S COLLEGES:
A Data Set to Inform the Differentiation
Discussion**

**Martin Hicks, Harvey P. Weingarten, Linda Jonker and Shuping Liu
Higher Education Quality Council of Ontario (HEQCO)**

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1 Yonge Street, Suite 2402
Toronto, ON Canada, M5E 1E5

Phone: (416) 212-3893
Fax: (416) 212-3899
Web: www.heqco.ca
E-mail: info@heqco.ca

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Executive Summary

The Ontario government has indicated its intention to negotiate individual mandate agreements with each of Ontario's postsecondary institutions and to amend funding formulas to focus resources on what each institution does best. These actions signal the government's desire to pursue a policy of greater institutional differentiation within the Ontario public postsecondary system. The purpose of this paper is to advance the conversation by examining differences among Ontario's 24 colleges on key variables related to programmatic diversity and participation in degree granting.

Regional programmatic diversity is a distinguishing factor among Ontario colleges. There may be greater scope for coordinated planning between neighbouring colleges to avoid unsustainable duplication.

Degree granting emerges as the most important distinguishing feature in contemplating formal differentiation between colleges. College degree granting represents 4% of college enrolment (2011), and 2% of overall Ontario degree-level enrolment. Its growth is concentrated in a small group of early leaders, mostly in the Greater Toronto Area. It dominates the differentiation discussion.

The relative youth and small scale of college degree granting provides an opportunity for government to set provincial objectives for future growth and directions, in terms of the types of college degrees to be offered and at which institutions. Setting clear objectives is an important condition precedent to the successful negotiation of bilateral mandate agreements.

Relevant considerations in shaping a degree-granting and differentiation strategy include: understanding student and employer demand; the imperative for strong external quality assurance and high and consistent standards for all degrees in Ontario; transfer connections between degree-granting institutions, and in particular with Ontario public universities; the impact of increased degree granting on the important skills and vocational offerings of colleges; and whether the GTA requires a unique solution, involving all of its colleges and universities, to meet the area's growing demand.

Purpose of this paper

On May 30 2011, the then-Minister of Training, Colleges and Universities announced the government's intention to negotiate individual mandate statements with each of Ontario's public postsecondary institutions and to amend funding formulas to focus resources on what each institution did best (Milloy, 2011). These statements signalled the government's desire to pursue a policy of greater institutional differentiation within the Ontario public postsecondary system, a policy recommended by several analyses suggesting the benefits of such an approach (Clark et al., 2009, 2011; HEQCO, 2010, 2013).

In June 2012, the Ministry of Training, Colleges and Universities (MTCU) pursued this differentiation policy in a tangible way by asking each of the province's 44 public postsecondary institutions to generate a mandate statement that articulated the institution's values, aspirations and goals and to identify three key institutional objectives consistent with that mandate. These submissions were reviewed by an independent Expert Panel convened by the Higher Education Quality Council of Ontario (HEQCO).

The Expert Panel strongly endorsed the goal of a more differentiated Ontario postsecondary system and urged government to adopt a more active role in system planning, lest the quality of higher education in Ontario continue to erode. The Expert Panel did not recommend a specific differentiation framework for Ontario, although it referenced such schemes in other provinces and states and thereby identified variables that were important to the differentiation frameworks in those jurisdictions (HEQCO, 2013).

An earlier paper by HEQCO (2010) laid out the arguments for and benefits of a more differentiated Ontario postsecondary system and offered some high-level advice to government about how this might be achieved. The Expert Panel Report on the Strategic Mandate Agreements (SMAs) continued that work by making specific recommendations to government and providing a more detailed commentary on the state of the postsecondary system in Ontario (HEQCO, 2013). The current paper builds on these reports by examining the diversity of Ontario's colleges and, based on the data, by suggesting a framework that could assist the development of a more differentiated postsecondary system.

Ultimately, as recommended by the Expert Panel, a key decision government will need to consider regarding differentiation is the utility of maintaining the strong college-university dichotomy that now exists in Ontario. As a first step, though, it is easiest to consider the issue of differentiation within each of the university and college sectors separately. The current paper focusses on colleges; a corresponding

analysis for the Ontario university sector was released in July 2013. Appendix A to this paper examines the established, formal state of differentiation between colleges and universities in Ontario, and notes some potential opportunities to strengthen further their relationships and interconnections.

Dimensions of College Differentiation

A limited number of measurable institutional characteristics have dominated discussions about possible college classification schemes. Prevalent among these are regional programmatic diversity and participation in degree granting.

Regional Programming. In its report, the Expert Panel on Strategic Mandate Agreements cautioned that “an institution’s location by itself is an insufficient rationale for distinctiveness. If other classification schemes are a guide, the type of credentials offered, the number credentials of a particular type offered and the degree of engagement in research are relevant attributes of institutional differentiation” (HEQCO, 2013, p. 12).

That said, there are many in the college system who would argue that a real dimension of the uniqueness of each Ontario college, true to the tradition of community focus in the college movement, is programmatic specialization, as each institution responds to serve the unique characteristics and needs of its local labour market.

In Ontario, colleges were created with defined geographic catchment areas from which they drew their students and to which they mapped their labour market. These were formally eliminated in 2002, though the current *Ontario Colleges of Applied Arts and Technology Act, 2002* maintains reference to serving “local and diverse communities” (OCAATA, 2002, s. 2(2)). Although colleges today attract national and international students, either to specific programs (for example, George Brown’s culinary programs) or more generally as a market strategy (for example, Centennial’s general international outreach), they remain firmly connected to their local communities.

An obvious avenue of further investigation is therefore an examination of how varied the menu of educational programs is between the 24 colleges. This is difficult to accomplish at the individual

program level, as there are about 850 different college programs¹ approved by the government. But it can be tested by rolling programs up into larger family groupings and examining differences in the enrolment mix between the colleges.

Degrees. Degree-level education is a recognized delineator in many college and polytechnic systems. In Ontario, degree granting by colleges is a decade old, and patterns are emerging in at least two dimensions. The first of these is simply a dimension of scale – some colleges are expanding degree granting with considerable momentum, others have experimented more cautiously, and a third set of Ontario colleges has chosen not to offer degrees.

The second is a more complex dimension of degree orientation and purpose. Ontario’s legislative framework for degree granting, the *Postsecondary Education Choice and Excellence Act, 2000*², defines college degrees as “baccalaureate degree[s] in an applied area of study” (PSECE, 2000, S. 4(5)(a)). Degrees offered by Ontario’s colleges are four-year degrees and are classified within the province’s official Ontario Qualification Framework at the same qualification category as four-year (honours) degrees offered by the province’s public universities. They are assessed by Ontario’s Postsecondary Education Quality Assessment Board (PEQAB) to meet many of the hallmarks of any undergraduate degree, with an industry twist: “A degree in applied area of study is normally designed to require a level of conceptual sophistication, specialized knowledge and intellectual autonomy similar to that in an honours or specialist degree program but with the disciplinary content oriented to an occupational field of practice” (PEQAB, 2010, p. 17).

Within that overall guiding frame, colleges are actively experimenting with or seriously contemplating a variety of different evolutionary manifestations of degree granting:

- As providers of first cycle (undergraduate) four-year degrees, mapped to successful entry into the job market
- As providers of first cycle degrees, applied or theoretical, with access to further study at the graduate level, perhaps at traditional universities or perhaps to be offered by colleges themselves at the master’s level

¹ Known as “MTCU Codes”. An MTCU code defines a specific college program which may be offered by one or more colleges across the system and is eligible for operating grant funding from the government.

² For greater clarity: the *Ontario Colleges of Applied Arts and Technology Act, 2002*, referenced earlier, establishes the colleges, names them, lays out their governance structures and their objects. The *Postsecondary Education Choice and Excellence Act, 2000* sets out the conditions under which various entities, including colleges, may be granted Ministerial consent to offer degree-level education in Ontario.

- As providers of the first year or years of a first cycle degree, with articulated transfer and degree completion pathways to universities
- As providers of first cycle degree completion opportunities for individuals who already possess vocational or applied skills but lack breadth, theory and research methods education
- As co-providers of partnered collaborative degree programs with universities
- As providers of shorter duration three-year first cycle degrees that serve any or all of the above purposes

Careful consideration of this second dimension becomes more pressing as the first dimension, scale, expands. The more degree-level activity at colleges, the greater the urgency to ensure that its evolution becomes defined, makes sense to students, is of a high standard of degree-level quality, and is successfully connected both to educational partners and to the labour market. A multiplicity of approaches, while innovative at an initial, pilot scale can become chaotic at the provincial level if not articulated more strategically if and when it scales up. Chaos and differentiation are very different things.

An examination of data on college program comprehensiveness would not be complete without casting an eye to graduate certificate activity. Graduate certificate programs are typically one year in length. They require a university degree or a college certificate or diploma for admission. Graduate certificate programs provide students with advanced and specialized skills and knowledge to prepare them for immediate entry to a career field. Examples include Global Business Management (Conestoga), Green Architecture (Algonquin) and Human Resources Management (Fanshawe). These programs constitute an expanding avenue of university-to-college transfer opportunity, and they are also attractive to the international student market. They are sometimes viewed within the college community as a differentiating feature.

While most college activity occurs in the postsecondary sphere, about 18% of total enrolment volume is non-postsecondary³ (academic upgrading, apprenticeship and other non-funded activity).⁴ Of this, apprenticeship constitutes a large and measurable block, and so this too is considered in the analysis.

³ "Postsecondary" is here defined as activity in the kinds of programs supported by the MTCU postsecondary operating grant.

⁴ Enrolment analysis by Colleges Ontario (2012), unpublished. Cited with permission.

Research Activity. There is considerable movement across Canada on growing the role of colleges in research, particularly applied research. This is often connected to the growth of degree granting. The organization Polytechnics Canada, for example, points to degree granting and research activity as twinned defining characteristics that differentiate its members as a distinct type of educational entity.

As a matter of public policy, the federal government has signalled its interest in promoting research at colleges by developing college funding streams through the Natural Sciences and Engineering Research Council of Canada (NSERC) College and Community Innovation Program, the National Research Council of Canada’s Industrial Research Assistance Program, and the Canada Foundation for Innovation College-Industry Innovation Fund. Ontario’s Ministry of Economic Development, Trade and Employment also funds applied research and commercialization in the province’s college system through the Colleges Ontario Network for Industry Innovations Program.

Research activity can theoretically be measured using the value of granting council or total external research moneys provided. However, a practical problem quickly emerges for Ontario. The arena of college applied research is nascent. Governments have only recently created eligibility rules and funding envelopes to encompass college applied research, and the amounts dedicated to the sector are extremely small at this point. These are supplemented by important but also relatively small (in terms of overall institutional revenues) and sporadic examples of applied research directly for the employer market and other clients. There may simply not be sufficient volume and maturity of research activity to meaningfully measure differentiation on this variable – yet. Sector leaders consulted in the preparation of this paper did not emphasize the importance of research as a differentiating feature but underscored instead the tradition of involving students in hands-on applied projects, including research, as an integral component of all college educational programming.

The data: How different are Ontario colleges on variables relevant to differentiation frameworks?

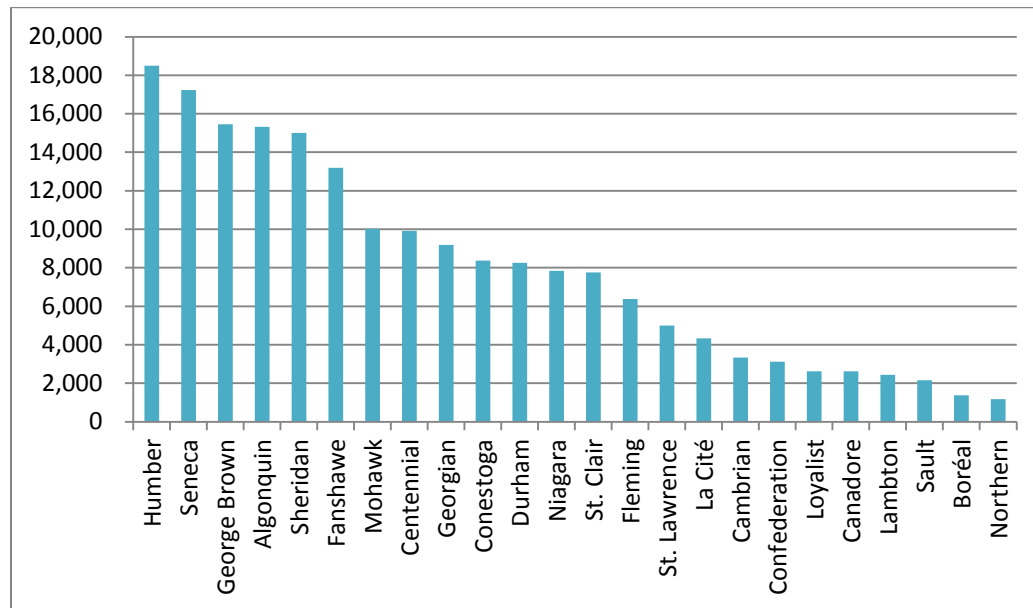
Table 1 provides data from each Ontario college on variables most relevant to the assessment of differentiation frameworks. Explanatory notes for all tables and figures are contained in Appendix 2.

Table 1: Overview of Ontario's colleges

| College | Size | | | | | | | Program Mix by Field of Study | | | | Apprenticeship | | Research |
|---------------|---------------------|---------------|---------------------|---------------------|--------------|----------------|-----------|--|------------|------------|------------|------------------------|---------------------|---|
| | FT Funded Enrolment | FTE Faculty | Total Revenue (\$M) | FT Funded Enrolment | | % of Enrolment | | # of Standard Deviations from the Mean % of FT Enrolment for Each Field of Study | | | | Total Funding (\$000s) | # of Seat Purchases | Colleges and Community Innovation Funding |
| | | | | Grad Cert. | Degree | Grad Cert. | Degree | Applied Arts | Business | Health | Tech | | | |
| Algonquin | 15,324 | 1,214 | \$267 | 458 | 262 | 3% | 2% | 0 | 1 | -1 | 0 | \$5,799 | 2,566 | \$250,000 |
| Boréal | 1,366 | 256 | \$70 | 12 | 0 | 1% | 0% | -1 | -1 | 3 | 0 | \$1,224 | 1,863 | \$0 |
| Cambrian | 3,338 | 322 | \$80 | 68 | 0 | 2% | 0% | 0 | -1 | 1 | 0 | \$2,618 | 367 | \$164,450 |
| Canadore | 2,621 | 181 | \$56 | 10 | 0 | 0% | 0% | 0 | -1 | 0 | 1 | \$933 | 613 | \$0 |
| Centennial | 9,923 | 1,073 | \$223 | 647 | 87 | 7% | 1% | -1 | 1 | 0 | 0 | \$9,237 | 3,691 | \$250,000 |
| Confederation | 3,123 | 300 | \$74 | 24 | 0 | 1% | 0% | 0 | -1 | 0 | 1 | \$1,226 | 430 | \$0 |
| Conestoga | 8,375 | 774 | \$155 | 326 | 628 | 4% | 7% | -1 | 1 | 0 | 1 | \$7,431 | 3,364 | \$49,998 |
| Durham | 8,252 | 476 | \$136 | 347 | 0 | 4% | 0% | 0 | 0 | 0 | 0 | \$3,596 | 1,134 | \$100,000 |
| Fanshawe | 13,191 | 865 | \$214 | 358 | 117 | 3% | 1% | 1 | 1 | -1 | -1 | \$3,566 | 3,331 | \$774,984 |
| Georgian | 9,192 | 740 | \$169 | 281 | 281 | 3% | 3% | -1 | 0 | 1 | 0 | \$2,548 | 1,095 | \$100,000 |
| George Brown | 15,446 | 1,064 | \$279 | 725 | 614 | 5% | 4% | -1 | 2 | 0 | -1 | \$5,065 | 1,545 | \$1,298,052 |
| Humber | 18,489 | 1,273 | \$334 | 1,407 | 1,982 | 8% | 11% | 1 | 1 | -1 | -1 | \$6,771 | 2,439 | \$0 |
| La Cité | 4,339 | 440 | \$87 | 26 | 73 | 1% | 2% | 1 | 0 | 0 | 0 | \$2,119 | 379 | \$648,956 |
| Lambton | 2,443 | 227 | \$63 | 48 | 0 | 2% | 0% | 0 | 0 | 0 | 1 | \$1,546 | 611 | \$859,433 |
| Loyalist | 2,625 | 279 | \$64 | 52 | 0 | 2% | 0% | 3 | -1 | -1 | -1 | \$1,858 | 2,960 | \$0 |
| Mohawk | 10,016 | 784 | \$177 | 266 | 0 | 3% | 0% | 0 | 0 | -1 | 1 | \$8,318 | 3,501 | \$1,000,000 |
| Niagara | 7,840 | 473 | \$122 | 324 | 138 | 4% | 2% | 1 | 1 | 0 | -1 | \$4,236 | 3,083 | \$900,000 |
| Northern | 1,180 | 153 | \$44 | 10 | 0 | 1% | 0% | -2 | -1 | 3 | 0 | \$1,207 | 762 | \$0 |
| Sault | 2,155 | 243 | \$50 | 57 | 0 | 3% | 0% | -1 | -1 | 0 | 3 | \$1,828 | 553 | \$0 |
| Seneca | 17,240 | 1,411 | \$325 | 602 | 1,144 | 3% | 7% | -1 | 2 | -1 | 0 | \$1,497 | 2,920 | \$1,374,113 |
| Sheridan | 15,012 | 915 | \$233 | 532 | 1,814 | 4% | 12% | 1 | 0 | -1 | -1 | \$1,625 | 418 | \$1,195,499 |
| St. Lawrence | 5,000 | 439 | \$99 | 29 | 172 | 1% | 3% | 1 | 0 | 0 | -2 | \$2,426 | 697 | \$250,000 |
| Fleming | 6,370 | 371 | \$92 | 214 | 0 | 3% | 0% | -1 | -1 | 0 | 2 | \$883 | 260 | \$549,999 |
| St. Clair | 7,752 | 480 | \$111 | 23 | 0 | 0% | 0% | 0 | 0 | 1 | -1 | \$4,183 | 2,061 | \$0 |
| Total | 190,613 | 14,753 | \$3,523 | 6,845 | 7,312 | 4% | 4% | 39% | 26% | 11% | 25% | \$81,740 | 40,643 | \$9,765,484 |
| Source | MTCU | MTCU | MTCU | MTCU | | MTCU | | MTCU | | | | MTCU | | NSERC |
| Year of data | 2011-12 | 2011 | 2011-12 | 2011 | | 2011 | | 2011 | | | | 2011-12 | | 2011 |

The variables related to size – full-time funded enrolment, full-time equivalent faculty and institutional revenues – are highly correlated.⁵ Figure 1 shows the ordering of colleges on the basis of enrolment size.⁶ It is a smooth gradient and suggests no natural points of delineation.

Figure 1. FTE-funded enrolment, excluding international students, of Ontario colleges



With regard to program diversity, Table 2 shows the distribution of college enrolments at all levels (certificate, diploma and degree) at a high level of aggregation, into four familiar groupings: applied arts, business, health and technology. In order to visualize how this might mesh geographically, remembering that college students tend to stay closer to home, the colleges are organized into three separate groupings: the northern colleges; the two French-language colleges; and the remaining colleges, in an east to west sweep.⁷ The table uses units of standard deviation to indicate the degree to which each college’s share of enrolment in the four groupings is below, at, or above the system-wide share.

⁵ The correlation coefficient between full-time enrolment and FTE faculty is 0.95; between enrolment and total revenues is 0.98; and between FTE faculty and total revenues is 0.98.

⁶ In part 1, the choice of universities’ enrolment measure (i.e., whether head count or FTE, including or excluding unfunded/international students) was simplified by the fact that the universities themselves had selected and published a representative approach in their Common University Data Ontario web site. Without such consensus guidance within the colleges, HEQCO has selected FTE-funded enrolment. For those who are curious about the impact of selecting other approaches, we would note that they are all tightly correlated, and the general trend will be the same. We acknowledge that other approaches (for example, including international enrolments) may result in some inversions of individual college “rank” by size within the system.

⁷ This is a different approach than the traditional regional breakdown. It eliminates the geographically disconnected “central” region around the GTA and better illustrates variations in programs in a smooth geographic continuum. Some discontinuities are unavoidable – Georgian being an example, as it is positioned at the north-south gateway and could be mapped either way.

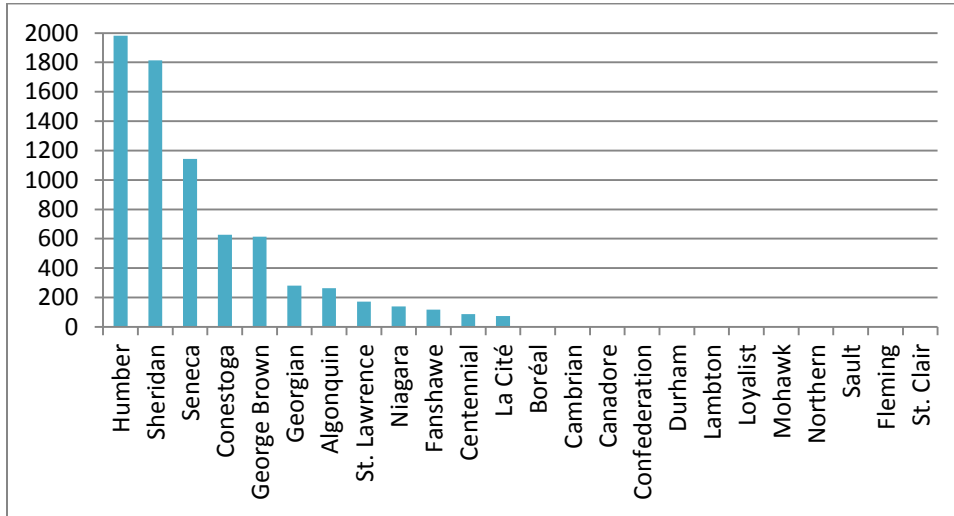
Table 2: Distribution of college programming emphasis by broad cluster, 2011

| Program Mix on a Geographic Continuum | | | | | |
|---------------------------------------|------------------------------|---|----------|--------|------------|
| | College | Program Mix by Field of Study | | | |
| | | # of Standard Deviations from the Mean Percentage of FT Enrolment for Each Field of Study | | | |
| | | Applied Arts | Business | Health | Technology |
| North | Canadore College | 0 | -1 | 0 | 1 |
| | Cambrian College | 0 | -1 | 1 | 0 |
| | Northern College | -2 | -1 | 3 | 0 |
| | Sault College | -1 | -1 | 0 | 3 |
| | Confederation College | 0 | -1 | 0 | 1 |
| French Language | La Cité collégiale | 1 | 0 | 0 | 0 |
| | Collège Boréal | -1 | -1 | 3 | 0 |
| South | Algonquin College | 0 | 1 | -1 | 0 |
| | St. Lawrence College | 1 | 0 | 0 | -2 |
| | Loyalist College | 3 | -1 | -1 | -1 |
| | Sir Sandford Fleming College | -1 | -1 | 0 | 2 |
| | Durham College | 0 | 0 | 0 | 0 |
| | Centennial College | -1 | 1 | 0 | 0 |
| | George Brown College | -1 | 2 | 0 | -1 |
| | Seneca College | -1 | 2 | -1 | 0 |
| | Georgian College | -1 | 0 | 1 | 0 |
| | Humber College | 1 | 1 | -1 | -1 |
| | Sheridan College | 1 | 0 | -1 | -1 |
| | Mohawk College | 0 | 0 | -1 | 1 |
| | Niagara College | 1 | 1 | 0 | -1 |
| | Conestoga College | -1 | 1 | 0 | 1 |
| | Fanshawe College | 1 | 1 | -1 | -1 |
| | Lambton College | 0 | 0 | 0 | 1 |
| St. Clair College | 0 | 0 | 1 | -1 | |
| | Mean | 38% | 21% | 14% | 26% |
| | Standard deviation | 0.0801 | 0.0821 | 0.0898 | 0.0711 |
| | System total | 39% | 26% | 11% | 25% |

Focussing on degree-level activity, it is worth noting that before 2002 there was no degree-level activity in the college system. As of 2011-12, 12 of the 24 colleges are in the degree business, most to a very limited extent. Three colleges that had experimented with degree-level programming in the mid-2000s

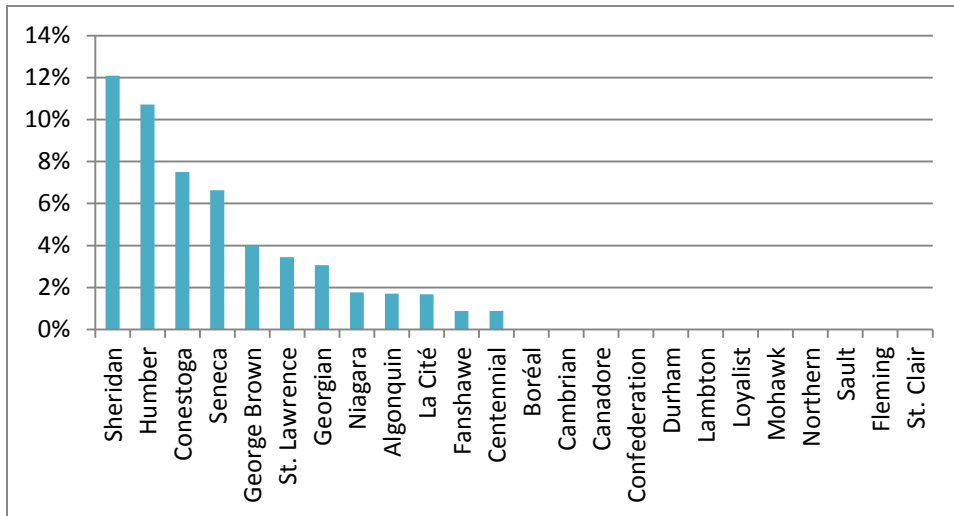
are not doing so today. Figure 2 shows the distribution of colleges on the basis of degree-level enrolment in 2011.⁸

Figure 2. Degree-level enrolment in 2011



To put these numbers in additional context, Figure 3 shows college degree-granting enrolment as a proportion of overall enrolment activity.

Figure 3. The percentage of enrolment of each college in 2011 at the degree level



⁸ Because of the rapid growth curve in college degree-granting we have chosen to show *enrolment* distribution at the degree level rather than *credentials awarded*. Credentials awarded at any point in time reflects intake volumes four years prior and has no capacity to capture any increase in activity since then. Total enrolment provides a blended view of the most recent cohorts and is therefore more reflective of recent growth.

The degree business is young and expanding, and the numbers change rapidly. Any snapshot in time must be interpreted in the context of momentum. Given this, it is helpful to analyze some related observations of the front-running institutions to provide additional context concerning their plans for the immediate future.

Table 3: Degree momentum for the top five colleges

| College | Enrolment at Degree Level 2011 | Growth in Degree Enrolment 2007 to 2011 | Programs Approved at Degree Level (as of June 21, 2013) | |
|--------------|--------------------------------|---|---|---------|
| | | | Approved | Pending |
| Humber | 1,982 | 182% | 21 | 5 |
| Sheridan | 1,814 | 30% | 13 | 7 |
| Seneca | 1,144 | 72% | 14 | 0 |
| Conestoga | 628 | 87% | 9 | 2 |
| George Brown | 614 | 52% | 8 | 0 |

Actually predicting future growth in degree granting is difficult. To illustrate what may happen if all other factors remain equal, we can simply extrapolate from 2011 enrolments by applying past rates of growth starting in 2004. The illustrative estimate for 2015 is shown in Table 4. We have ignored any limiting impact of the current ceiling on the percentage of programs that colleges may offer at the degree level⁹, and we have assumed that three-year advanced diplomas will not be offered as degree programs in 2015.

⁹ The current limitation set by government is a maximum of 15% of approved programs at the degree level for Conestoga, George Brown, Humber, Seneca and Sheridan, and 5% for all other colleges.

Table 4: An illustration of near-term growth in degree-level enrolment

| College | Degree Enrolment 2011 | Illustrated Degree Enrolment by 2015 |
|--------------|-----------------------|--------------------------------------|
| Humber | 1,982 | 2,700 |
| Sheridan | 1,814 | 2,600 |
| Seneca | 1,144 | 1,700 |
| Conestoga | 628 | 800 |
| George Brown | 614 | 900 |
| System | 7,315 | 10,100 |

Though the predictions in Table 4 may be crude, the inescapable point is that degree enrolment in the college system will continue to be small, both in relation to overall college enrolment and in relation to the degree enrolment capacity in the province. Assuming no growth in university enrolments, we project that the college system will be providing about 3% of Ontario's degree-level enrolment capacity by 2015.

The data in Table 1 confirm that research is too small and too volatile at this stage of its development to serve as a meaningful college differentiator.

Apprenticeship is a critical area of college service to the province. It addresses the much-discussed concern about future supplies of skilled tradespeople and is an outstanding example of college-industry partnership and workplace integrated learning. Across the college system, apprenticeship enrolment represents too little of college activity overall (just over 2% of total revenues, with a range among the colleges from a low of 0.5% to a high of 5%) to emerge as a distinguishing feature on which to classify colleges. The variation in apprenticeship volumes and intensity between colleges speaks to the opportunity to manage efficiencies within that program, while ensuring geographical coverage for apprentices who are spending the majority of their educational time indentured to local employers across the province.

Graduate certificate activity shown in Table 1 is somewhat correlated to degree-granting activity across the system.¹⁰ On balance, and given the dramatic impact of degree-level activity on college evolution, it is cleaner to focus the analysis on degrees, as we have done above.

Conclusions

Formal mechanisms for regionally coordinated program planning

Not surprisingly, the data reveal some variation in colleges' programmatic profiles. Individual colleges are well recognized for identifiable programs in which they specialize and excel. Examples include Fleming's resources programs, Algonquin's information technology programs and Georgian's Automotive Business School. These may provide unrealized opportunities for neighbouring colleges to plan around those specialty programs and avoid an unsustainable duplication of expertise and infrastructure. In other instances, high-profile programs, while important points of service excellence, represent too small a share of overall enrolment, or manifest at colleges too geographically distant from their neighbours, to influence inter-college enrolment planning significantly.

More generally, the data demonstrate some variation in the patterns of growth across the broad programming domains (business, applied arts, technology and health). Additional programmatic differentiation may become visible from a close examination of individual program offerings and enrolments. This is not a basis for formally classifying colleges into different types or groupings. The data show no extremes of colleges operating in only one or two domains of the four traditional areas. There may, however, be opportunity to better coordinate and further tailor the varied program foci of neighbouring colleges serving overlapping student and labour markets.

The only formal step in the program planning process for this kind of coordination currently comes at the very end, when MTCU makes a program approval and funding determination. That is a far point down the road of development and readiness to ask questions about fit, duplication, regional specialization and efficiencies. It also takes the determination completely out of the hands of the colleges themselves, who in all other respects exercise considerable and appropriate control over the business of program and enrolment mix.

¹⁰ The correlation coefficient is 0.79.

Alternatives (beyond the scope of this paper) could range from organizing joint, regional, college-based coordinating processes, with a mandate to manage the planning of program agendas to maximize inter-collegial quality, choice and efficiency; to outright amalgamation of sets of adjacent colleges into one or conjoined entities.

Degree granting

College degree granting is young, and it is a moving target. An argument can be made that it is too new to use as a differentiating fact. On the other hand, nothing comes a remote second as a distinguishing feature for the purpose of contemplating formalized college differentiation.

There are three clear leaders in the four-year degree movement, on a combination of volume, breadth and momentum: Humber, Sheridan and Seneca. They, together with fifth-place George Brown, are all in the Greater Toronto Area (GTA), a region of the province that is underserved in terms of degree spots to student population. Their individual enrolment levels are as yet relatively small. Collectively they constitute a degree-level capacity (around 5,500 in 2011) larger than OCADU (3,300) and somewhat smaller than UOIT (7,800). They represent 4% of the total (degree-level) enrolment in the GTA.¹¹

Looking at these data, some may argue that college degree granting could (still) be retired or grandfathered, such that the college system is focussed exclusively on the delivery of more traditional and critically important skills and vocational programming, and degree granting is provided by an appropriately differentiated university system. This would have several implications:

- The vocational and experiential focus of college degree granting adds an important and timely dimension of innovation into the traditional degree landscape.
- College four-year degrees meet a high and respected quality assurance standard through PEQAB. This activity is appropriately credentialed at a degree level. (Some argue that PEQAB is university-centric in its approach. PEQAB is simply degree-centric.)
- Despite being small in absolute scale, degree granting already represents a material proportion of overall educational activity and institutional fabric at the leading colleges.
- The provision of quality assured degrees adds to the overall earned reputation of participating colleges, and by extension the college system.

¹¹ All in, 2011 college degree-level enrolment represents under 2% of university enrolment across the province.

However, this very moment of scaling up college degree capacity from nothing to a potentially material contribution in Ontario, or at least in the GTA, is also the necessary moment to reassess questions of purpose and focus. The plans of the three leaders articulated in their SMAs demonstrate the variety of degree development pathways that could be taken into the future:

- Humber plans to expand degree programming up to and including master’s degrees.
- Sheridan plans to achieve Association of Universities and Colleges Canada¹² accreditation with a majority of students enrolled in degree programs.
- Seneca, in addition to its own degrees, plans to construct more 2+2 block transfer agreements, with York and others.

The initial vision articulated in the legislation and Ministry guidelines (applied, undergraduate, employment-oriented, equal in quality to but not duplicative of university offerings) is splintering. A coordinated and aligned approach going forward favours both students and employers.

The fact that most college degree activity is concentrated within the GTA suggests that any examination of future growth and focus should involve the GTA universities. The GTA is a unique region both because it is a single student and employer market served by multiple degree-granting institutions and because it faces considerable demographic pressure for growth in the supply of degree-level capacity. Involvement of the partner regional universities will also help clarify the nature of future growth (stand-alone degrees and/or “2+2” partnerships¹³) and the important question of strong student pathways between all institutions.

There is also an ongoing debate about a broader conversion of college three-year advanced diplomas into degrees. Colleges Ontario foresees that “three-year degrees offered by colleges will, in many cases, be built from the foundations of current three-year diplomas that offer advanced, sophisticated applied education and currently meet the same learning outcomes as three-year degrees at Ontario universities” (Colleges Ontario, 2012, p. 8).

¹² AUCC is a national body representing the interests of Canada’s universities.

¹³ Recent research published by HEQCO found that in most jurisdictions offering 2+2 college-to-university degree transfer models, the cost of the 2+2 transfer program was lower than the combined cost to students and government of a four-year university-only program. The study found that the cost savings were higher to the student (via lower tuition) than to government transfer payments (Trick, 2013).

The conversion of existing three-year advanced diplomas to three-year degrees would likely not result in differentiation between colleges, because all 24 colleges offer three-year diplomas. They represent 15% of enrolment in the system, ranging from a low of 5% to a high of 20% across the 24 institutions. Unlike college four-year degrees, advanced diplomas were not constructed to meet Ontario’s existing degree framework. Whether they map to currently understood degree type expectations has not been externally tested. They were designed and built explicitly to meet diploma-level outcomes.

Should an external review determine that these important programs do not currently meet degree-level outcomes, their successful migration to the degree level would require either that the degree concept be expanded to accommodate them as they are, or that they be reworked to meet degree-level expectations.

The key question government would need to consider with regard to the first of these options is whether an expansion of the degree concept would risk devaluing college degree granting in Ontario. A degree from Ontario, regardless of whether it is offered by a public college, public university or private university, has a strong associated value. That is a real and a marketing advantage for our students and employers, and for Ontario’s global reputation. To introduce a new tier or manifestation of degree may risk placing colleges very explicitly into a “second class” status behind their own four-year degrees and university degrees. This would serve no one.

With regard to the second option of reshaping three-year diplomas into three-year degrees, an analysis is beyond the scope of this paper, but the following questions need to be addressed in considering such a transformation:

- What are the indicators of student and employer demand for this?
- How closely do advanced diplomas and the colleges offering them come to meeting degree-level outcomes, and what would be needed to fill any identified gaps? For the sake of fundamental integrity and objectivity, this needs to be a professional and external analysis. PEQAB would be a good choice.
- What form of initial and periodic external quality assurance and review can be built to demonstrate that these reconstituted programs are functioning at the degree level for which Ontario is known? (Again, PEQAB, with necessary adaptations to process a much higher volume of business, is an obvious candidate. Alternatively, Ontario may wish to consider establishing a

common degree quality assurance mechanism for all degree-level activity in the province, including that of our public universities.)

- What are the long-term cost implications of converting three-year advanced diplomas to degrees, both for student tuition and for operating and research grants from government, both at the colleges delivering them and with regard to any impacts on university activity levels?
- How would the important trades and vocational programming base of colleges be protected and championed as degree granting is introduced across the system? And how important is this goal against competing goals of instilling a greater sense of market and employer responsiveness into degree-level education in Ontario via the college system? Past experience suggests that the migration of college activity to the degree level maintains momentum once started. In Ontario, Ryerson Institute of Technology began as a trades-focussed institution after the Second World War, shifting to polytechnic status in 1963, degree granting in 1971, and full university status in 1983. Grant McEwan Community College in Alberta opened in 1971, began offering university transfer programs in 1988, achieved degree granting status in 2004, and was made a university in 2009. Similarly, Alberta's Mount Royal College began as an elementary/secondary school, became a public college with a transfer affiliation with the University of Alberta in 1966, began applied degree granting activity in 1995, and became a university in 2007 and a member of AUCC in 2009. In England, the polytechnic system was created in 1965 from named existing colleges and other institutions. The polytechnics all became universities in 1992.¹⁴ So an important question is whether Ontario wants to trigger these kinds of evolutionary pressures across its college system and, if so, with what forms of limitations or leeway with respect to farther, future ending places?
- How does Ontario ensure that, regardless of the lay of the land in terms of institutional types or institutional credentials, there is an appropriate mechanism for student transfer and access to graduate-level programming, based on a transparent evaluation of learning outcomes and not on credentials.

The four-year/three-year discussion illuminates an important foundational choice for the development of college degree granting: whether to focus degree granting in selected colleges and perhaps

¹⁴ The phenomenon is sometimes labelled "academic drift". A corresponding but opposite phenomenon is that of "vocational draft" at universities that are adopting a more applied approach. For a canvassing of the experience in a variety of jurisdictions, see Doem (2008).

differentiate them formally within the system, or whether to introduce degree granting universally as a layer of significant activity at all colleges.

Where do we go from here?

Ontario colleges are strong. They serve the labour market through a range of industry-aligned programming. They are a popular choice for Ontarians and they are valued by employers.¹⁵

Would differentiation further strengthen the colleges' contributions and performance? The active debate within the college community on this question is around degree granting.

Setting provincial objectives for college degree granting, and addressing the questions and considerations posed above, is a necessary first step.

A growth and differentiation plan – what kinds of college degrees, offered where and situated how in the overall provincial degree landscape – follows from the objective-setting exercise.

A stronger and more universal credit transfer mechanism is a necessary prerequisite to sustain any meaningful level of differentiation, including the level we already have.

These are directions that the government itself must set. They will not coalesce from the actions or evolution of institutions.

The negotiation of Strategic Mandate Agreements follows last, for two reasons: because the setting of objectives and the formulation of a growth plan becomes the government's negotiating platform for the evolution of degree-level education and institutional differentiation, and because a settlement of the degree question will free up focus to continue to develop and support through SMAs the full range of critical offerings, including skills upgrading, apprenticeship, and vocational certificate and diploma programs, that Ontario needs from its stellar college system.

¹⁵ In 2010 colleges graduated 72,000 students and universities graduated 80,000 undergraduates. Graduate outcomes surveys show that 84% of 2011 college graduates and 88% of 2009 university graduates were employed within six months of graduation.

References

- Clark, I. D., Moran, G., Skolnik, M. L., & Trick, D. (2009). *Academic Transformation: The Forces Reshaping Higher Education in Ontario*. Queen's Policy Studies Series. Montreal and Kingston: McGill-Queen's University Press.
- Clark, I. D., Trick, D., & Van Loon, R. (2011). *Academic Reform: Policy Options for Improving the Quality and Cost-effectiveness of Undergraduate Education in Ontario*. Queen's Policy Studies Series. Montreal and Kingston: McGill-Queen's University Press.
- Colleges Ontario. (2012). *Empowering Ontario: Transforming Higher Education in the 21st Century*. Toronto: Author. Retrieved from [http://www.collegesontario.org/policy-positions/position-papers/Empowering%20Ontario%20\(2\).pdf](http://www.collegesontario.org/policy-positions/position-papers/Empowering%20Ontario%20(2).pdf)
- Doem, B. (2008). *Polytechnics in Higher Education Systems: A Comparative Review and Policy Implications for Ontario*. Toronto: Higher Education Quality Council of Ontario.
- Higher Education Quality Council of Ontario. (2012). *The Productivity of the Ontario Public Postsecondary System Preliminary Report*. Toronto: Higher Education Quality Council of Ontario.
- Higher Education Quality Council of Ontario. (2013). *Quality: Shifting the Focus. A Report from the Expert Panel to Assess the Strategic Mandate Agreement Submissions*. Toronto: Higher Education Quality Council of Ontario.
- Milloy, J. (2011). Putting Students First. Speech to the Canadian Club. Toronto.
- Ontario Colleges of Applied Arts and Technology Act*, Statutes of Ontario 2002, c. 8.
- Post-secondary Education Choice and Excellence Act*, Statutes of Ontario 2000, c. 36.
- Postsecondary Education Quality Assessment Board. (2010). *Handbook for Ontario Colleges*. Toronto: Author. Retrieved from <http://www.peqab.ca/Publications/HNDBKCAAT2010.pdf>
- PolyTechnics Canada. (2013). Retrieved from <http://www.polytechnicscanada.ca/>
- Trick, D. (2013) *College-to-University Transfer Arrangements and Undergraduate Education: Ontario in a National and International Context*. Toronto: Higher Education Quality Council of Ontario.
- Weingarten, H. P., & Deller, F. (2010). *The Benefits of Greater Differentiation of Ontario's University Sector*. Toronto: Higher Education Quality Council of Ontario.

Weingarten, H. P., Hicks, M., Jonker, L., & Liu, S. (2013). *The Diversity of Ontario's Universities: A Data Set to Inform the Differentiation Discussion*. Toronto: Higher Education Quality Council of Ontario.

Appendix 1: College and Universities as a Current Fact of Differentiation in Ontario

Having separately examined the state of and case for differentiation within each of the college and university systems in Ontario, it is worth reflecting on the very fact of differentiation between colleges and universities. As obvious as this fact may seem, it may not be sufficiently celebrated as a working illustration of formalized differentiation.

HEQCO’s Expert Panel, convened to review institutional Strategic Mandate Agreements, observed that “differentiation is a tool... its benefits are to maximize the quality of the overall system by enabling each [sector] to make an optimal and distinctive contribution to the province’s higher education system...” And so it is worth asking: does college-university differentiation deliver to Ontario advantages that support the Panel’s statement?

There is nothing unique about having both a college and university system; most jurisdictions operate and value versions of both. Colleges and universities are internationally understood to have different, complementary, and at times overlapping roles.

For Ontario, the distinction between colleges and universities is the single stable, long-standing, legislatively enshrined and culturally anchored element of postsecondary differentiation.¹⁶ The *Ontario Colleges of Applied Arts and Technology Act, 2002* defines the objects of the colleges as follows:

to offer a comprehensive program of career-oriented, post-secondary education and training to assist individuals in finding and keeping employment, to meet the needs of employers and the changing work environment and to support the economic and social development of their local and diverse communities. (OCAATA, 2002, S. 2(2))

Universities have no unified legislative frame in Ontario. With a few exceptions, their individual acts of incorporation speak to a variety of objects such as “advancement of learning and dissemination of knowledge” (extract from Windsor); “scholarship” (extract from Waterloo); “the intellectual, spiritual,

¹⁶ There are a few much more limited, largely more recent additional legislative distinctions. Three colleges (Conestoga, Humber and Sheridan) are named in regulation as “institutes of technology and advanced learning”. They and two others (George Brown and Seneca) are given higher permissible margins of degree granting activity. Within the university sector, some parameters are placed on the legislative mission statements of OCADU, Ryerson, UOIT and the recently created Algoma University. There is also one other college-level provincially funded institution of higher learning, delivering diploma-level health programs and managed by the Ministry of Health and Long Term-Care: the Michener Institute in Toronto.

social, moral and physical development of its members and the betterment of society” (extract from York); or they simply grant the university degree-granting powers with no specific objects enumerated (e.g., Western).

The two sectors’ evolution from these distinct legislative starting points, and their future plans as revealed through their recent Strategic Mandate Agreement submissions, show that both sets of institutions are attuned to the primary societal “objects” of serving Ontario’s labour market, knowledge needs and citizenry. They simply do so in very different ways.

Ninety-nine per cent of college credentials are certificates and diplomas at various levels; 97% of university credentials are degrees at various levels.¹⁷ Their focus on access is differentiated and often complementary.¹⁸ They offer students clearly understood choices. Their undergraduate intakes and graduation volumes are roughly equal; they are both popular choices for Ontarians. Employers understand the distinction between them.

The college-university classification system has permitted the province to concentrate funding investments in an efficient and effective manner. Universities take on the lion’s share of research. Colleges take on youth and adult training, and apprenticeship functions. Relatively high cost-per-student initiatives, such as the Second Career program for job-displaced adults and the *Reaching Higher* graduate expansion, are recent examples of the mapping of public resources that leverage the distinctiveness of these two differentiated sectors.

Key Performance Indicators and long-term income tracking demonstrate that both offer handsome rates of financial and non-financial return to their graduates.

These observations are not offered to lock either universities or colleges within hard confines. The line between them has been, is, and always should be blurred. Universities offer distinctively vocationally focussed programming and work place integrated learning. Colleges incorporate theoretical and general learning in their programming, and have begun offering degree programs. A significant number of Ontarians select combination educations that feed from both, either through collaborative ventures (e.g., most nursing programs across Ontario), by informal transfer (which can be a difficult journey) or by

¹⁷ College data are from MTCU (2011). The college number will likely drop to 96 to 94% as ongoing growth in college degree-level intakes impact the graduate credential mix. University data is CUDO (2011) and is more likely to remain stable.

¹⁸ See, for example, Higher Education Quality Council of Ontario (2013), *Performance Indicators*. Figures 6 and 7 and Table 1 summarize differences in participation patterns between colleges and universities.

sequencing credentials either from college to university, or university to college (7% of college graduates from the class of 2011 reported studying in university six months after graduation, and 4% of university graduates from the class of 2009 reported studying at a college).¹⁹

Nor are these observations intended to conclude that the current assignment and division of institutions and roles across the college-university classification scheme are optimal. The point is merely to be cognizant of the value of this existing dimension of differentiation, even as one investigates other possibilities.

With regards to movement and opportunity across this fact of differentiation, we note the following:

Transferability. There is a well recognized weakness in Ontario’s structured differentiation: transferability. Any differentiated system begs for well organized, transparent transfer mechanisms. Transfer is not required in a homogenous system. There is no need to create assessment and connecting mechanisms, other than the simply administrative, to move from one grade six class to another within Ontario: the mission is universal; the curriculum and learning expectations are standardized. But differentiation demands transfer, and Ontario is still grappling with how to make this work between colleges, between universities, and most pressingly between colleges and universities. There are some who see transfer opportunities and mechanisms as a threat to differentiation. Transfer is a necessary condition of meaningful, sustainable differentiation.

Regional Cooperation. Given the volume of students seeking combinations of college and university experiences, and mindful of shared labour markets, the enhancement of cooperation, planning and coordination between colleges and universities is likely most intensely necessary and fruitful at a regional level. In their SMAs, many institutions provided examples of cooperative initiatives with their neighbouring partner institutions. Expectation of and support for regional cooperation should be a key element of government’s stewardship role for the sector.

Greater Toronto Area. As noted above, the GTA as a region is unique in its concentration of degree-granting institutions, its shared labour and student market, and its need for degree-level capacity. It therefore represents an important opportunity for cooperative college-university institutional planning. A GTA solution need not look the same as the optimal solutions in other regions of the province.

¹⁹ MTCU graduate outcomes surveys.

Undergraduate Institutions. In this paper we consider the possible emergence of a layer of colleges with a significant degree-granting role. In the companion university paper we observe a group of primarily undergraduate universities. There could in the future, and depending upon decisions the government may take, be considerable overlaps between these two sets of degree-granting institutions, and much they would learn from one another. Consideration should be given to identifying and supporting those overlaps to create a strong continuum of undergraduate opportunity in the province.

Appendix 2: Explanatory Notes for Figures and Tables

Table 1. re: Overview of Ontario's College

- All data sourced from MTCU unless otherwise indicated.
- Fall 2011 funded full-time enrolment excludes enrolment in collaborative nursing programs. Converted to full-time equivalent by taking full-time headcounts x percentage of total program duration offered x program funding unit value for each program.
- Program concentration index (-3 to 3) represents number of standard deviations from the mean percentage of full-time enrolment for each program cluster. The closer a score is to 0, the closer the share of enrolment in that particular cluster is to the system average.
- Research funding sourced from NSERC search engine and includes funding for the College Community Innovation Fund, which is managed by NSERC in collaboration with the Social Sciences and Humanities Research Council (SSHRC) and the Canadian Institutes of Health Research (CIHR). The College Community Innovation Funding contains the following grants: Industrial Research Chairs for Colleges, College-University Idea to Innovation, Innovation Enhancement, Technology Access Centre, Applied Research and Development, and Applied Research Tools and Instruments. The total value of the College-University Idea to Innovation grant awarded to Fanshawe College in partnership with Western University is listed for Fanshawe. The Technology Access Grants do not include full application preparation funding.

Figures 1, 2 and 3. re: Full-time enrolment and degree-granting enrolment

These are graphical representations of data from Table 1.

Table 2. re: Distribution of college programming emphasis

- Recreated from Table 1.

Table 3. re: Degree momentum

- Enrolments and growth in enrolments calculated from MTCU enrolment reports, fall 2011.
- Approved and pending degree programs provided by MTCU, as of June 21, 2013.

Table 4. re: Near-term growth in degree-level enrolment

- 2015 illustrative degree-level enrolments generated by linear extrapolation of historic enrolment growth. See Appendix 3 for more details.

Appendix 3: Actual Degree Enrolment and Forecasted Degree Enrolment

