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CAAT baccalaureates: What has been their impact on students and colleges?

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There is a companion document to this document. It contains:

- The project methods
- The project literature reviews
- Detailed data analyses

The citation for the companion document is:

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1. Introduction

Ontario's colleges of applied arts and technology (CAATs) were granted authority to offer bachelor degrees in 2000, and the first degree programs were offered in 2002. The rationale for granting colleges permission to offer degrees was threefold: first it was to meet the needs of a higher skilled workforce in a changing economic, social and political environment; second, it was to widen access to degrees for Ontarians overall, but particularly for students from disadvantaged backgrounds who are more likely to attend a college than a university; and third, it was anticipated that college degrees would be less expensive than university degrees for students and governments (Skolnik 2016b).

As in other jurisdictions where colleges have been granted the authority to offer degrees, the emergence of degrees in Ontario's colleges marked a change in their status to become a baccalaureate granting institution. Demand for degrees in colleges has grown strongly since they were first introduced in 2002, but they are still a small part of provision in colleges overall and they are a small component of under-graduate degrees in Ontario, in part because their growth is constrained by government policy.[1] However, their importance outweighs their numbers. The introduction of college degrees signifies a new type of institution in Ontario, and they blur the sectoral divide between colleges which offer diplomas and certificates and universities which offer degrees.

On the one hand, it is possible to argue that college degrees are an extension of colleges' traditional role in providing a highly skilled workforce (Skolnik 2013b, 2016b). New occupations have emerged and the knowledge and skill demands of many occupations traditionally served by colleges have increased, and arguably, colleges need to offer higher level credentials if they are to continue to meet these labour market needs (Karmel 2010). On the other hand, college degrees presuppose a change in colleges' identity and role as a postsecondary education institution, and in the relations between colleges and universities, and by implication the role of colleges.

This report is the culmination of a research project that explored the impact of college degrees on colleges and on students. We conclude that college degrees are largely fulfilling their intended purposes. The labour market outcomes for college degrees are strong, stronger than for lower level credentials. Degree programs are career-focused and applied. College degrees are providing opportunities for students who otherwise may not be able to attain that level of education. Pedagogy is strongly student focused, classes are small and experiential learning is a prominent feature. Students are able to access degrees using their diploma as the entry credential, and receive credit for their diploma in their degree. Students enjoy the applied, hands-on, practical educational experience. They enjoy their work placements and internships. They love their teachers and say their teachers are accessible and knowledgeable in their field. Many students value the geographic proximity of their college because it means that they don't have to leave home to study. This is important for all students, but particularly for older students whose jobs and families tie them to a location. Colleges are able to meet the educational needs as well as the labour market needs of their regions and communities, particularly in regions where there is no university and students have limited opportunities for degree studies. Government funding for college degrees is similar to that for diplomas which means they are cheaper to fund than university degrees (a cause of much concern for institutional leaders in colleges), and fees are mostly lower than in universities.

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[1] Chapter 3 discusses enrolment numbers and other data that outlines the scope of degree provision in colleges.

However, there are also challenges and tensions. The fact that colleges offer degrees, and that these credentials are equivalent to degrees in universities, is not well understood by employers, the community or potential students. There is also a tension in colleges. On the one hand, colleges use university degrees as the standard against which their degrees are measured by emphasising that their degrees are just as rigorous as university degrees and that they must meet the exact same standards as do universities; on the other, colleges insist on the applied nature of their degrees as a key point of distinction from university degrees. The status of college degrees was a problem for institutional leaders, teachers and particularly students, even though students valued their degree. The distinctiveness of college degrees as credentials with an emphasis on applied, experiential learning is being challenged as some universities also claim these attributes in distinguishing their degrees in their university from other universities in a crowded market.

While students' labour market outcomes from degrees are generally good, ensuring bachelor graduates have access to masters degrees in graduate schools in universities is much more problematic because universities are reluctant to accept college degrees as valid credentials for entry into masters programs. Colleges perceive this difficulty as a failure by universities to recognise that college degrees are equivalent to those offered by universities and as a devaluing of the importance and rigour of applied learning.

Colleges find the external accreditation process which they must undergo for their degrees to be arduous, onerous, expensive and restrictive, and argue that it reinforces their subservient status compared to universities, which are self-accrediting. Many college leaders reported difficulties in recruiting teaching staff who have PhDs *and* industry experience to teach in degrees. Leaders reported that this has changed over time and varies by field, but is a problem in several fields. Some teaching staff who *do* have PhDs want to do applied research, and colleges also want them to do applied research, but funding, resources and workloads make this difficult.

Workloads are a key tension; there is no specific provision in the industrial agreement for additional preparation time for those teaching in degrees. There are perceptions that as degrees become more important that 'two tiers' of faculty may be emerging; those with PhDs who teach in degrees, and those without PhDs who teach in diplomas and certificates. Some faculty expressed concerns that diplomas are becoming less valued, and some felt that they would not be recruited if they were applying for their own jobs today because they don't have a PhD, or (less often) a master's degree.

Our research found that the degree is reshaping the colleges that offer them. This is consistent with research in Ontario (Galea 2015, Skolnik 2005, 2012, 2013b) and other jurisdictions (Bathmaker et al. 2008, Wheelahan et al. 2009a, Floyd, Falconetti, and Hrabak 2009, Vigil Laden 2005, Floyd and Walker 2009, Levin 2004, Fleming and Lee 2009). Levin (2004: 16) explains that 'Baccalaureate degree-granting status for community colleges signifies an end to an identity as a two-year institution'. He says that 'new regulations, norms and cognitive systems … are a consequence of baccalaureate programming and of the degree's legal status' (Levin 2004: 15). Staff recruitment practices emphasise those with higher-level qualifications, and requirements for scholarship become important. This may contribute to academic drift and 'mission creep' in which institutions may engage in 'imitation based on the need for legitimacy' (Levin 2004: 17). On the other hand, the introduction of degrees can lead to an emphasis on the scholarship of teaching as it has in colleges in England (Healey, Jenkins, and Lea 2014) and Australia (Waters et al. 2015), and, according to our interviewees, in Ontario. This has the potential to benefit *all* provision and not just degrees, and it leads to a greater emphasis on scholarship in the institution as a

whole, including scholarship on pedagogy. This can contribute to deeper understandings of good pedagogic approaches throughout the institution on the one hand, and on the other, open opportunities for all teaching staff to participate in scholarly activities and applied research, and not just those teaching in degrees.

The degree is contributing to differentiation within the college sector in Ontario. Some 13 of Ontario's 24 colleges offer degrees; however, the Institutes of Technology and Advanced Learning, which are the five colleges of applied arts and technology that can offer up to 15% of their provision as degrees, accounted for 86.6% of this provision in 2013/2014. The remaining CAATs can offer up to 5% of their provision as degrees. This is in part a consequence of deliberate government policy and partly due to institutional size. A key conclusion that we draw from our analysis of colleges in Ontario is that their role in offering vocationally oriented or applied degrees fills an important gap in provision in Ontario, particularly compared to the United States and other Westminster systems (this discussion is developed in chapter 2).

Research questions and approach

This research analyses the impact of bachelor degrees on colleges and on students. It builds on the literature on college degrees in Canada and in Ontario (Panacci 2014, Laden 2005, Galea 2015, Skolnik 2005, 2009, 2012, 2013b, 2016b), and it contributes to the international literature on the impact of degrees offered by colleges in the second, vocationally oriented sector of postsecondary education (Parry and Thompson 2002, Bathmaker 2005, Floyd, Falconetti, and Hrabak 2009, Vigil Laden 2005, Floyd and Walker 2009, Wheelahan et al. 2012, Wheelahan et al. 2009a, Wheelahan 2016, Longhurst 2010, Ruud, Bragg, and Townsend 2010, Webb et al. 2017). It explores the social and cultural impacts of offering bachelor degrees on colleges, and the impact degrees have had on institutional and organisational structures, policies and administrative processes and faculty recruitment. It also explores the impact bachelor degrees have had on students, including on their identity as students, the reasons they chose to undertake a degree at a college, their perceptions of their programs and the outcomes they have achieved in the labour market. The project's research questions are:

1. What is the location of responsibility for baccalaureates within colleges and arrangements for staffing, supporting students and providing other resources?
2. What are colleges' processes for baccalaureates' curriculum development, program approval and quality assurance?
3. What are the perceptions of policy makers, college leaders and teachers on the effects of baccalaureates on colleges' mission, identity and relations with other institutions?
4. What are students' reasons for studying a baccalaureate at a college and what is their self-identification as students? To what extent do college baccalaureates open access to students from disadvantaged backgrounds and what are college baccalaureate graduates' opportunities for postgraduate study?
5. What is the nature of the curriculum of college baccalaureates and how does this differ from the curriculum of cognate baccalaureates offered by universities? And,
6. What is the role of college baccalaureates in the labour market?

We employed multiple methods in undertaking this research. A detailed description of the methods is provided in Appendix 1. Research methods included:

- Two literature reviews prepared by Michael Skolnik in preparation for this project which were

published as working papers on our project website entitled: *College Bachelor Degrees in British Columbia, Alberta, and the United States* and *Origin of Ontario College Bachelor Degrees.*[2] They have been incorporated in chapter 2 of this report.

- Analysis of policy documents and accreditation documents on the Postsecondary Education Quality Assessment Board's website. This included analysis of the Postsecondary Education Quality Assessment Board's (PEQAB) *Handbook for Ontario's Colleges*, which provides the guidelines and requirements for accreditation of a bachelor degree within an Ontario College. We also explored documents relating to past and current applications and consents for accreditation of degrees by Ontario's colleges.

- Detailed analysis of the websites of the 13 public colleges that offer baccalaureates to explore how the *institution* positions itself, and how their *degrees* are positioned on their websites. This provided insights into institutional positioning strategies, but also institutional identity and how the institution positioned its degrees relative to its other provision.

- Curriculum analysis of four degrees in three fields of study in colleges, which was compared to curricula of four degrees in cognate areas offered by traditional universities in Ontario, and those offered by Ontario universities that emphasise either the high level of co-op or work-placements or emphasise the experiential and applied nature of their curriculum.

- Analysis of 2015-16 data that informed college Key Performance Indicators. These data were collected from three surveys: Student Satisfaction Survey, Graduate Outcomes Survey and Employer Survey. We also compared the socio-demographic characteristics of college baccalaureate students with those available data on university baccalaureate students to determine the extent to which college baccalaureates are facilitating baccalaureate attainment for groups that have been underserved by universities.

- Semi-structured interviews with 102 participants. This included four senior policymakers or college sector leaders who play or have played a role in implementing policy on college baccalaureates in Ontario. We conducted interviews in seven colleges: three of these colleges were designated as Institutes of Technology and Advanced Learning (ITALs) which enables them to offer up to 15% of their provision as degrees; two were colleges of applied arts and technology (CAATs) which are authorised to offer up to 5% of their provision as degrees; and, two were CAATs that do not offer degrees even though, like the other CAATs, they have the authority to offer properly accredited degrees up to 5% of their provision. We sought a balance between colleges located in the Greater Toronto Area (GTA) and those located outside the GTA in selecting colleges for inclusion in the study. At the five degree-granting colleges, interviews were conducted with institutional leaders, faculty members and students whereas we interviewed institutional leaders at the two colleges that do not offer degree programs. Overall, we interviewed 45 students, which included 10 diploma students and 35 students undertaking baccalaureates. We have not included analysis of the diploma students in this report, but will do so in subsequent work. Table 1 shows the profile of interviewees at each college.

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[2] See: https://www.oise.utoronto.ca/pew/Publications/index.html

Table 1: Profile of interviewees at colleges

	Institutional leaders	Faculty members	Students	Total
ITAL 1	2	8	9	**19**
ITAL 2	3	8	6	**17**
ITAL 3	4	7	8	**19**
CAAT degree granting 1	2	7	7	**16**
CAAT degree granting2	4	5	15	**24**
CAAT non-degree granting 1	2			**2**
CAAT non-degree granting 2	1			**1**
Total	**18**	**35**	**45***	**98**

We also interviewed four senior policymakers or college sector leaders bringing the total number of interviewees to 102.

*Includes 10 diploma students

Structure of report

Chapter two explores Ontario's colleges in their international context. It argues that while Ontario's colleges are similar to analogue institutions in other countries, particularly Australia, Britain and the United States, that there are important differences. We argue that Ontario's colleges are similar to colleges in these countries and share similar challenges and opportunities and that there are many family resemblances between the systems, but that Ontario's colleges have played, and continue to play, a stronger role in offering higher vocational education or vocational higher education than in those other systems, because of the absence of 'middle tier' institutions in Ontario.

Chapter three outlines the number of degrees offered by Ontario's colleges, how many students they enrol, the fields in which they are enrolled, how colleges' degrees are accredited and how the accreditation process has changed. It draws on interviews with policy leaders, institutional leaders and faculty members to explore dilemmas and challenges in the accreditation process.

Chapter four is the curriculum analysis. It compares the curriculum of cognate baccalaureates offered by four college degrees; four baccalaureates offered by three universities that emphasise the applied and experiential nature of their programs; and four baccalaureates offered by three traditional universities. It tests the claims by colleges that their degrees are more applied and experiential than those offered by universities by comparing the weighting of theoretical and applied knowledge in the curriculum, the structure of the degree, the presence of work-integrated learning, the extent to which industry connections are emphasised, and the credentials of faculty teaching in the programs. The analysis provides insight into the level of differentiation in baccalaureate education available to students in Ontario.

Chapter five analyses student perceptions and outcomes using data from the 2015-2016 Ontario Student Satisfaction Survey; the 2015-2016 Ontario Graduate Outcomes Survey; the 2015-2016 Employer Survey, and college student enrolment and graduation data. The focus in this chapter is understanding students' backgrounds, the reasons why they undertook their studies, their perceptions

of their programs, their labour market outcomes, and employers' perceptions of degree graduates using the data sources above.

Chapter six reviews the perceptions of 35 students we interviewed at five colleges in Ontario. We explored their understandings about their degree studies, how their studies help to shape their identities and their perceptions about the benefits and challenges of studying a degree in a college.

Chapter seven discusses the opportunities and challenges colleges have in offering degrees. It draws on the interviews with institutional and policy leaders, and with faculty members. It discusses interviewees' perceptions about the role and purpose of the college degree, how it is fulfilling that purpose, perceptions of challenges associated with the way that college degrees are understood, status and credibility of the credential, relations with universities, and internal challenges and opportunities. It discusses whether colleges should offer masters degrees.

Chapter eight, which is the final chapter, discusses the policy implications arising from the project's findings. It argues that colleges' role in offering a distinctive credential that serves a range of purposes is restricted by government policies that seek to limit the extent of this provision. Economies of scale are needed to build an understanding in the community and among employers about the role and purpose of college degrees, and to build institutional cultures, frameworks and policies that can support degree provision, and ensure students have access to high quality provision and good outcomes, underpinned by a culture of scholarship. At the same time, the Ontario government needs to develop a strong policy that supports the expansion of college degrees and the growth of colleges as strong degree granting institutions, while at the same time ensuring that they continue to serve their traditional access mission, and continue to offer provision that meets the range of needs in the labour market.

2. Ontario's college baccalaureates in a historical and inter jurisdictional context

This chapter opens by giving the background to the college baccalaureate in other provinces of Canada and in the United States and the origin of Ontario college bachelor degrees. It then considers the applied degree issue and college degrees and institutional differentiation. These sections were drafted by Skolnik. The chapter then considers the implications of this context for designing Ontario's postsecondary education system. It returns to Skolnik's (2016c) description of the development of college systems in USA on a hierarchical model and Ontario's foundation of its colleges on the European parallel model. It argues that while college baccalaureates may seem anomalous in the hierarchical model, they are a modest development of the parallel model, in which colleges in many European jurisdictions routinely offer applied or vocationally oriented masters.

College bachelor degrees in British Columbia, Alberta, the United States and Ontario

We open this chapter putting Ontario's college baccalaureates in a historical and interjurisdictional context by considering the development of college baccalaureates in British Columbia, Alberta and the United States.

Introduction

On April 27, 1965, the United Kingdom Secretary of State for Education and Science, Anthony Crosland announced his government's intention to allow polytechnic institutions in England and Wales to offer degree programs. Until then only universities had been allowed to offer degree programs. Thus began a movement in which governments in many political jurisdictions around the world authorized other types of postsecondary institutions than universities to award baccalaureate degrees. The institutions to which degree-granting authority was extended varied considerably between - and in some cases, within - countries. One thing that these diverse institutions tended to have in common was experience in providing vocational education programs for adults.

As with the nature of the non-university institutions that were allowed to offer baccalaureate programs, the rationale for the reform varied from jurisdiction to jurisdiction. However, three reasons were shared by most jurisdictions. The strongest motive was to increase accessibility to baccalaureate level study, particularly for groups that heretofore had been under-represented in the universities. Another factor was the recognition that a higher level of formal education was increasingly required in many occupations as a consequence of technological change and advances in knowledge. Thirdly, it was thought that the goal of providing more postsecondary education for more people could be achieved in a more economical way by relying at least in part on other types of postsecondary institutions than universities.

While numerous educational, economic, social, and political factors contributed to the decisions of different jurisdictions about whether to allow non-university institutions to offer baccalaureate programs, and if so, on what scale, one of the major factors influencing this decision was the scale of the university sector relative to the demand for baccalaureate level education. For example, Pratt noted that in the early 1960s only about four per cent of what was then considered the normal university age group in England and Wales entered universities (Pratt 1997).

Some jurisdictions encouraged the rapid expansion of degree-granting in the non-university sector, while others placed limits on the rate and scale of expansion. In Finland, the number of degrees awarded by the polytechnic institutes grew from 1,638 in 1995 to 20,462 just seven years later (Statistics Finland 2016). In contrast, in 2003 the state of Texas gave limited authorization for community colleges to award baccalaureate degrees, but ten years later only 166 degrees were awarded (Daugherty et al. 2014). In some jurisdictions, the non-university sector accounts for a high proportion of the total number of baccalaureate degrees awarded, for example, more than 60% in the Netherlands and Finland, and nearly half in Ireland; while in almost all American states in which colleges award baccalaureate degrees they account for less than one per cent. Generally in the jurisdictions in which non-university institutions award relatively few degrees, the restrictions and conditions placed on the awarding of the degrees are more stringent and onerous than in the jurisdictions in which these institutions award degrees on a substantially larger scale.

The jurisdictions that appear to be most similar to Ontario in regard to the conditions under which colleges award bachelor degrees, the degree approval process, and the scale of degree-awarding by colleges are: British Columbia, Alberta, the United States – particularly the state of Florida - and Australia.

The college baccalaureate in other provinces of Canada and in the United States

Although it was not uncommon during the 20th century for 2-year institutions in the United States and Canada to be converted into 4-year colleges, the idea of community colleges adding some baccalaureate programs to their repertoire while maintaining their commitment to the original community college mission is of relatively recent origin. In the late 1980s, British Columbia became the first Canadian province or American state in which multiple community colleges were authorized to offer baccalaureate degrees while being required to maintain their community college mandate. Although British Columbia had developed extensive arrangements under which students could take first and second year university level courses in arts and sciences at a college and then transfer to a university for the third and fourth years to earn a bachelor's degree, there was one problem with this system. That was, as Dennison (2006: 109) observed: "[t]he colleges were located primarily in the rural regions of the province," while "the universities were constructed in the major urban centres of population". The misalignment between the locations of colleges and universities took on special significance when coupled with the growing awareness of British Columbia's low rate of baccalaureate degree attainment relative to other provinces, particularly outside the Vancouver and Victoria areas (Provincial Access Committee 1988).

A provincial committee appointed by the government to consider the access problem recommended that three colleges in areas that did not have a university – Cariboo College, Okanagan College, and Malaspina College – be enabled to provide the third and fourth years of university baccalaureate degree programs, so that students could earn a bachelor's degree without having to move to Vancouver or Victoria. This recommendation was accepted, and subsequently a fourth institution, Fraser Valley College, was also given this role. Initially, these four colleges offered third and fourth year university courses in partnership with one of the universities which awarded the degree. Within a few years, each college was allowed to leave its university partnership and award the degrees in its own name, at which time they changed their names to university college (Carr 2001). Adoption of the name university college signaled the independence of the institution and the fact that it combined characteristics of a college and a university.

As Dennison observed, granting the power to award degrees to some institutions in the nondegree sector did not go unnoticed by other institutions in the sector, several of which began to press for the same authority (Dennison 2006). In response to pressure from the rapidly growing part of the lower mainland south of the Fraser River, the government allowed Kwantlen College to become the fifth university college. However because of its proximity to UBC and Simon Fraser University, Kwantlen was "not mandated to offer traditional degrees in arts and sciences" (Carr, 2001: 4). Rather, it was allowed to award only "applied degrees", though the term applied was not defined. Its first degrees were in design, nursing, business and computing (Fleming and Lee 2009). In addition, the authority to award applied degrees was given to the other colleges and to British Columbia Institute of Technology (BCIT) and Emily Carr College of Art & Design.

In 2004, the trades, vocational and academic transfer components of Okanagan University College became a separate community college, and the degree-granting component of the institution became a campus of the University of British Columbia. In 2005, University College of the Cariboo was amalgamated with the BC Open University to become Thompson Rivers University. After apparently successfully arguing that the label university college was too confusing to the public, the remaining university colleges – along with one of the community colleges – were designated by the government as "special purpose, teaching" universities.

Although the word college was removed from their names, the four former colleges that became teaching universities continue to be hybrid institutions. They became members of Universities Canada, but three of the four also continued to be members of Colleges and Institutes Canada. Non-degree programs continue to constitute the bulk of their awards. For three of the four former university colleges which became universities for which program data are available from Education Planner BC (2016),[3] the ratio of non-degree (trades, certificate, diploma, and associate degree) to bachelor's programs is 1.8, 2.6, and 3.4. The number of master's programs offered by the new universities ranges from none to five, and there are no doctoral programs. The persistence of non-degree programs in these institutions is noteworthy, since one of the main reasons why some object to the idea of colleges being allowed to award degrees is that doing so may result in colleges abandoning their traditional college activities. However, two decades after these institutions began to offer baccalaureate programs, and eight years after becoming universities, the majority of programs are still the type that they offered as colleges.

The new universities have less autonomy from government than the older universities, and their senates have a restricted scope of authority compared to their counterparts in the older universities (British Columbia, 2008). Levin, Aliyeva and Walker (2016) have argued that while these institutions combine some characteristics of universities with characteristics of colleges, they have "maintained their alignment with provincial governments' market liberalism and neoliberalism" (Levin, Aliyeva & Walker, 2016: 166). Levin had earlier described what this alignment meant for colleges as involving "less emphasis on education and more on training; less emphasis on community social needs and more on the economic needs of business and industry; less emphasis upon individual development and more on workforce preparation and retraining" (Levin 2001: 171). Neoliberal colleges and neoliberal universities share a commitment to performativity, productivity and servicing society's economic goals. However, Levin, Aliyeva and Walker suggest that what distinguishes these institutions as neoliberal universities from their earlier existence as neoliberal colleges is the incorporation of values and practices associated

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[3] See: https://www.educationplannerbc.ca viewed 4 October 2016

with more emphasis on merit, selectivity, and competition, as reflected for example in the adoption of the university framework of academic rank.

Levin, Aliyeva and Walker report also that faculty are now expected to have a substantial research role, even if their teaching loads have not been reduced from what they were when the institutions were colleges, and in spite of the fact that the institutions in which they work are called teaching universities. However, such expectations as there may be for faculty to conduct research are not codified in the same way that they are for older universities. For example, perusal of the faculty collective agreements in these institutions does not reveal explicit statements regarding institutional requirements for substantial faculty involvement in research. With respect to such features as institutional culture, faculty role, and research, the teaching universities in British Columbia seem more like the large Ontario colleges that offer many baccalaureate programs than like most Ontario universities. Besides bicameral governance and faculty rank, where the former university colleges differ most from Ontario colleges is that the majority of their degree programs are in traditional arts and sciences disciplines.

Even with the renaming of so many of BC's former colleges as universities, there remain 15 colleges and institutes (not counting BCIT). Baccalaureate degrees are awarded by 12 of the colleges and institutes, which offer from one to 11 degree programs each, for a total of 41 programs in all.[4]

While increasing access to the baccalaureate was the principal motive for giving colleges the authority to award degrees in British Columbia, in Alberta it was to meet labour market needs in emerging occupations (Campus Alberta Quality Council, 2016a). In 1995, the Government of Alberta made it possible for colleges and institutes of technology to apply, on a program-by-program basis, for permission to offer applied baccalaureate degrees, which soon were popularly referred to simply as "applied degrees". Colleges could either develop a continuous four-year degree program, or build on existing two-year diploma programs. Most colleges chose the 2 + 2 model, and an evaluation committee recommended that colleges normally adopt the laddered model with a diploma exit (Applied Degree Evaluation Advisory Committee 1998). Whichever model was employed, the applied degree was required to consist of 6 academic semesters plus 2 semesters of work experience, formally designated as Directed Field Experience.

The new degree generated considerable interest, and as of June 30, 2004, the government had approved 32 applied degree programs in such fields as applied petroleum engineering technology, applied environmental management, and applied geographic information systems (Alberta Colleges and Technical Institutes, 2004). However, two developments changed the trajectory of these degrees. One was the designation of the two largest colleges in the province – Grant MacEwan College in Edmonton and Mount Royal College in Calgary as baccalaureate-granting institutions, and the two institutes of technology – Southern Alberta Institute of Technology in Calgary (SAIT) and Northern Alberta Institute of Technology in Edmonton (NAIT) as polytechnic institutions (Alberta Ministry of Advanced Education and Career Development 2007). With the change in their designations, all four institutions were given the authority to award "regular" baccalaureate degrees, whereas previously the only degrees that they had been allowed to award were the applied degrees. Once these four institutions, which offered a large majority of the applied degrees, obtained the authority to award baccalaureate degrees, they ceased submitting applications for new applied degrees, and a trend toward converting applied degrees into regular degrees ensued (Marshall 2008). The Department of Advanced Education and Technology reported that by 2009-2010 there were only 20 applied degree programs, with a combined enrolment of

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[4] See: https://www.educationplannerbc.ca/ viewed 22 June 2017.

3,300 FTEs {Alberta Advanced Education and Technology, 2011). In 2009, both Grant MacEwan College and Mount Royal College became universities with a mandate similar to that of the teaching universities in British Columbia.

The other development of note was the establishment of the Campus Alberta Quality Council in 2004. The CAQC was given responsibility for advising the government on all new degree programs, including applied degrees awarded by the colleges. Prior to its establishment, applications for new applied degree programs were considered directly by the Ministry of Advanced Education and Career Development. A review of all the annual reports of the CAQC indicates that since responsibility for review of proposals for new applied degrees was transferred to the CAQC, only one new applied degree has been approved for any of the other 11 public colleges in the province (Campus Alberta Quality Council 2016b). Checking the June 30, 2004 list of approved applied degree programs against the web sites of each of the public colleges shows that as of September, 2016, six applied degree programs were being offered by these 11 colleges. Based on comparison of all three data sources – the 2004 list of approved applied degree programs, the annual reports of the CAQC, and the web sites of the institutions, it appears that the two institutes of technology offered a combined total of 16 baccalaureate programs: six applied degree programs and ten baccalaureate degree programs. Thus, in total the colleges and institutes of Alberta offer 22 baccalaureate programs, considerably fewer than their counterparts in British Columbia, and fewer than Humber College in Toronto. The peak number of applied degrees was probably higher than 32, as Baker reports that the largest provider, Mount Royal College, had five more programs in 2006 than it did in 2003 (Baker 2011). From somewhere in excess of 32, the total number of applied degrees had fallen to 12 by 2016.

Considering the momentum that the college baccalaureate degree movement in Alberta had in the late 1990s and early 2000s, the tapering off of the movement in recent years has been quite striking. The transformation of the two institutions that offered the largest numbers of baccalaureate programs into universities was obviously a major factor in reducing the number of baccalaureate programs offered by the colleges. This transformation may have impacted the college baccalaureate in another way besides the withdrawal of its baccalaureate program numbers from the college category. Baker notes that by the late 1980s, Mount Royal College had adopted the goal of becoming a degree-granting institution and began pressing for the authority to award baccalaureate degrees (Baker, 2011). According to Baker, however, Mount Royal's aim was opposed by some government officials, university leaders, and other colleges and institutes. The government's compromise was the applied degree, which gave all the colleges something, and satisfied the universities by limiting the colleges to awarding a degree which was different from the kind that universities awarded (Baker, 2011). Failing to get what it wanted, Mount Royal made the best of the situation by developing numerous applied degrees while continuing to push for broader degree-granting authority. When Mount Royal and MacEwan finally were given that broader authority, the public colleges that wanted to offer degree programs could no longer ride on their coattails, though it is not clear how many of the others wished to offer many – or any baccalaureate programs by that time.

Though only 12 only applied degree programs exist now, the Alberta applied degree was noteworthy in at least two ways. One was that it provided a 2 + 2 pathway to a degree in applied fields of study at a time when obtaining such pathways was difficult throughout Canada and the United States, even in colleges that had exemplary pathways in academic subjects. Second, the Alberta applied degree was clearly differentiated from the degrees that are awarded by universities, as is explained in the assessment handbook of the Campus Alberta Quality Council (2016a). The differentiation of the Alberta applied degree, however, is a two-edged sword. On the one hand, it may make the degree attractive to

students who prefer a different type of educational experience than that provided by universities, and for that reason may provide a rationale for government support. On the other hand, its differentiation from a university degree may jeopardize its academic credibility, which in turn could have implications for its attractiveness to prospective students.

Data compiled by the provincial government showed that while graduates of applied degree programs were much less likely to enter a postgraduate program in a university than graduates of regular baccalaureate programs, a small number of applied degree graduates did manage to get admitted to graduate programs (Alberta Advanced Education and Technology 2011). Graduates of applied degree programs were more satisfied with their programs, teachers, and the overall quality of their educational experience than were graduates of all other credential types; and their median salaries upon graduation were 8.7% higher than the salaries of other baccalaureate graduates, and 28.2% higher than the salaries of diploma graduates (Alberta Advanced Education and Technology, 2011).

Weinrib and Jones (2014) noted that besides British Columbia, Alberta, and Ontario, there is some provision for colleges to award baccalaureate degrees in three other provinces and one territory. However, degree granting is quite limited in all four of these jurisdictions. There is only one college in Prince Edward Island and the same in Yukon, and each of these colleges has approval for a single degree program. Only one of Saskatchewan's colleges has authority to award the baccalaureate and that is for only one degree. In Manitoba, Red River College has authority to offer two baccalaureate programs, while University College of the North may offer bachelor's degrees in business administration and education as well as a bachelor of arts with five majors.

There is similar variation in the United States as in Canada with respect to the numbers of colleges that are authorized to award baccalaureate degrees in different states and the numbers of programs that they may offer. There are two distinct patterns of state approval for colleges to award baccalaureate degrees. One pattern is where an individual college seeks state approval to offer a baccalaureate program, or programs, in response to identified local needs. Examples are Westark Community College in Fort Smith, Arkansas, which obtained state approval to offer up to nine bachelor's degree programs in 1997 (McKee 2005), and Great Basin College in northeastern Nevada which obtained approval in 1999 to offer a bachelor's degree in elementary education (Remington and Remington 2005). In several cases, the institutions following this pattern were, or became, branch campuses of a state university, as Westark College became the University of Arkansas at Fort Smith.

In the other pattern, a state-level decision is made to give authority to award baccalaureate degrees to all, or to a subset, of its colleges. Often, the initial step in this direction is, as was the case in Alberta and Ontario, for the state to undertake a pilot project in which some colleges are enabled to offer a limited number of baccalaureate programs the results of which are closely monitored. In 2003, the legislature in Texas approved a pilot project in which three colleges were allowed to offer up to five Bachelor of Applied Science or Bachelor of Applied Technology programs each, and in 2005 the state of Washington approved a pilot project in which four colleges were selected to offer a limited number of baccalaureate programs (Russell, 2013). Subsequently, Washington approved additional institutions and programs, while Texas continued to study the matter (Daugherty, Goldman, Butterfield & Miller, 2014). In 2016, 15 of Washington's 34 colleges were offering a total of 35 bachelor's degree programs (Hammer 2016).

Within the United States, "Florida stands alone in the extent to which policy makers have recognized a direct role for community colleges in meeting the state's baccalaureate needs" (Russell, 2013: 73). Similarly to British Columbia, a major factor in the state's decision to allow colleges to award

baccalaureate degrees was recognition of its low rate of baccalaureate degree attainment – in the 1990s it ranked 46th of the 50 states (Furlong 2005). However, in Florida anticipated work force shortages, particularly in teaching and nursing, was also an important factor. In 1999 the colleges were encouraged to seek partnerships with universities (Floyd and Falconetti 2013) and they were allowed to seek approval to offer their own baccalaureate programs "only as a last resort where no university was willing to establish a partnership" (Russell, 2013: 74). However, legislation in 2008 made it easier for the community colleges to award baccalaureate degrees, and by 2011, 18 of the 28 community colleges were awarding baccalaureate degrees (Floyd & Falconetti, 2013), and enrolment in the baccalaureate programs totaled 25,388 (Cunningham 2013). The 2008 legislation also prohibited the colleges from awarding graduate degrees, and gave them the option of dropping the word "community" from their names. By 2010, all but 8 colleges had changed their name to "state college" (e.g., Daytona State College) or simply "college" (e.g., St. Petersburg College).

By 2014, 23 of Florida's 28 colleges were offering a total of 150 baccalaureate degree programs (Cunningham, 2013). The dominance of Florida in college baccalaureate degrees is evident, as Russell had reported in 2013 that 57 colleges in 18 states were offering a total of 469 baccalaureate programs (Russell, 2013). Hence, Florida accounts for more than a third of the baccalaureate-granting colleges in the United States and nearly a third of the college baccalaureate degree programs.

Several factors contributed to Florida becoming the predominant location of the community college baccalaureate in the United States. One might have been the local influence of the most articulate and forceful advocate for the community college baccalaureate, Ken Walker, President of Edison College in Fort Myers, Florida, and founding president of the Community College Baccalaureate Association, an international organization dedicated to promoting better access to the baccalaureate degree on college campuses (Community College Baccalaureate Association 2016). In regard to structural factors, besides having one of the lowest rates of baccalaureate degree attainment in the United States in the 1990s, Florida also ranked 47th in the number of postsecondary institutions per million residents (Neuhard 2013). With a population 44% greater than Ontario's, Florida had only 10 public universities in 1998 (it has 12 now). Besides being relatively few in number, Florida's universities were alleged to be giving more emphasis to graduate than to undergraduate studies (Pappas Consulting Group 2007). It was in this context that the Florida Postsecondary Education Planning Commission considered the establishment of a new "middle tier" of state colleges, interposed between the universities and the community colleges, the primary function of which would be to offer baccalaureate degree programs (Florida Postsecondary Education Planning Commission 1998). A study for the Commission showed that middle tier institutions played an important role in providing baccalaureate access in many states. Of the 8 states that had the largest middle tier sectors, as of 2013 there were no community college baccalaureate degrees in 5, one degree each in two of the states, and more than one college baccalaureate degree in only one state (Florida Postsecondary Education Planning Commission 1998). Ultimately, rather than creating a new state college system the decision was to enable the community colleges to play the role of a middle tier of state colleges in addition to their community college role. Hence, 70 per cent of the community colleges changed their names and all but 5 added baccalaureate-granting to their missions.

Theorizing a connection between the emergence of the community college baccalaureate in the United States and the absence of a middle tier in a state's postsecondary system suffered a setback in 2014 when California became the 21st state to allow community colleges to award baccalaureate degrees. Dating back to the state's 1960 Master Plan, California's system consists of three distinct sectors: 10 research universities that comprise the University of California sector; 23 bachelor's and master's

granting institutions of the California State University sector; and 110 community colleges. However, this could be seen as perhaps only a partial setback for theory, since the California State University campuses do not exactly fit the definition of a middle tier in the MGT Report cited earlier, as they are major providers of master's as well as bachelor's programs. In any event, in January, 2015, 15 of the 34 colleges that applied were given approval to offer one baccalaureate program each as part of a pilot project (Asimov, 2015). The reasons stated for the initiative were to address the state economy's need for an additional 60,000 baccalaureate degrees a year; to increase accessibility to degrees, particularly for non-traditional students; and to make baccalaureate degrees more affordable (California Community Colleges Chancellor's Office 2015). It is of course too soon to tell, but given the prominence of California's college sector in the community college movement in the United States, the entry of California's colleges into baccalaureate-granting could influence other states to move in this direction.

Origin of Ontario college bachelor degrees

When Ontario's colleges were given the opportunity to award baccalaureate degrees in 2000, it marked the culmination of a series of events that had begun more than a decade earlier with the Vision 2000 review of the role and mandate of the colleges (Ontario Ministry of Colleges and Universities 1990). These events were part of an effort to improve the opportunity to attain a baccalaureate degree for students who were interested in the types of programs that colleges offer, or in what Vision 2000 referred to as "advanced training" (Ontario Ministry of Colleges and Universities, 1990: 41). Addressing this issue had been one of the principal needs identified in the province-wide consultations that comprised a major part of the review. Besides improving arrangements for college-to-university transfer, research studies of this issue commissioned by Vision 2000 also considered the development of joint programs between colleges and universities (Smith 1989) and allowing colleges to offer baccalaureate programs (Skolnik 1989). The recommendations in the Vision 2000 report concentrated on improving arrangements for combined college-university studies, but also included a provision for development of college programs of advanced training with a "unique credential" (Ontario Ministry of Colleges and Universities, 1990: 41).

Subsequently, the Task Force on Advanced Training (Pitman 1993), which was established to do further analysis of the role of the colleges in providing advanced training, moved the ball further in the direction of baccalaureate programming for the colleges. The Task Force recommended the establishment of a new agency that would encourage universities and colleges to collaborate in the development of baccalaureate programs of a more applied nature than the typical university program. The proposed new agency would also have the authority to award degrees for programs delivered wholly by a college in cases where no university wished to collaborate with a college in offering a program in an area of identified provincial need. It was the Task Force's research on the state of collaboration between universities and colleges in baccalaureate programming that led it to suggest that degree programs might be offered by colleges as a last resort. It found that the colleges had 70 agreements with provincial universities pertaining to baccalaureate programs, only two more than the number of agreements that they had with out-of-province universities. A study of 415 college students who had moved to an Ontario university showed that nearly half received no transfer credit at all, more than a quarter received only 1-3 credits, and only 8 percent received 6 or more credits (Pitman, 1993).

The perception of presidents of Ontario colleges was that the major impediment to more effective collaboration between colleges and universities were the negative attitudes that the universities had towards collaboration with the colleges. This was borne out by a doctoral research study by Young in which presidents of both colleges and universities were asked about their perceptions of the factors that

supported or impeded collaboration (Young 1992) For college presidents, the negative attitude of universities towards collaboration with the colleges was seven times stronger than the next inhibiting factor, fidelity to the original mission of the colleges. University presidents acknowledged the negative attitude of their institutions towards collaboration with colleges, though it was judged as less important than incompatibility between the missions of universities and colleges (Young, 1992).

In response to the report of the Task Force, the government directed the establishment of the College-University Consortium Council (CUCC) in 1996 to "facilitate, promote and coordinate joint education and training ventures" (Armstrong 2008: 3). It was anticipated that not all the universities would join the consortium, only the ones that attached importance to developing collaborative arrangements with colleges and were prepared to make substantial moves in that direction. However, before the arrangements for the consortium were finalized, all the universities decided to join. During the early 1990s the government had been encouraging collaboration between sectors, and it is possible that the universities that were unenthusiastic about collaboration thought it prudent to join lest they be perceived as unsupportive of the government's postsecondary education agenda. In any case, the inclusion of all the universities in the consortium did not likely improve its chances of success. A former head of the Council of Ontario Universities had observed that, "when the collectivity of universities moves, it moves convoy-like, at the pace of the slowest vessel" (Monahan 2004: 22) .

In spite of the efforts of the CUCC, in a 1998 brief on the role of the colleges in provincial economic development, the board chairs and presidents of the colleges lamented the lack of progress in college-university collaboration (Association of Colleges of Applied Arts and Technology of Ontario, 1998). The brief expressed the view that the hopes of Vision 2000 and the Task Force on Advanced Training had not been realized, and that the increase in workplace needs for advanced training had outpaced progress in college-university collaboration. It complained that "too often" graduates of Ontario colleges are forced to attend out-of-province universities to advance their education due to "lack of recognition from Ontario universities for skills and knowledge attained" (Association of Colleges of Applied Arts and Technology of Ontario, 1998:9). The brief warned of negative consequences for the provincial economy if this situation were not corrected, and it suggested that allowing colleges to award applied degrees, as had been done recently in Alberta, would provide a partial solution to the challenges facing the provincial economy. The board chairs and presidents thus requested "that the Ministry of Education and Training be authorized to approve applied degrees to selected Ontario college programs" (Association of Colleges of Applied Arts and Technology of Ontario 1998: 9).

In requesting that colleges be allowed to award degrees, ACAATO was challenging a long tradition in Ontario of restricting the authority to award degrees to a narrow range of postsecondary institutions. In 1983, the Legislature enacted the Degree Granting Act, one of the purposes of which was to codify the government's view that only the Legislature can give authorization for an institution to award degrees. At the same time as the Degree Granting Act came into force, the government reaffirmed its commitment to what had come to be known as the Robarts Policy. This policy dated back to the 1960s when Premier Robarts announced in the Legislature that the province had a sufficient number of universities, and henceforth any other institution that wanted to award degrees could do so only through affiliation with an existing university (Ontario Council on University Affairs 1991). From the mid-1960s through the 1990s, the only exceptions that were made to this policy were adjustments in the degree-granting status of Ryerson University and allowing Nipissing University to become independent of Laurentian University.

It became the practice of the government to seek the advice of the Ontario Council on University Affairs (OCUA) on matters pertaining to the awarding of degrees, and under this advice Ontario became one of the most restrictive jurisdictions in North America in regard to the regulation of degree granting (Skolnik 1987). In a 1991 document, OCUA set forth a set of conditions for degree-granting that would have been impossible for an Ontario college to meet (Ontario Council on University Affairs, 1991). In a companion document a year earlier, OCUA asserted that any desire that the colleges had to be involved in degree programs could be satisfied through cooperation with the universities (Ontario Council on University Affairs, 1990). OCUA noted "the preparedness of the universities to enter into serious planning of such initiatives" as "innovative joint programs, custom degree-completion programs or advanced standing arrangements" (Ontario Council on University Affairs 1990: 45). This perception was at odds with what Young (1992) found in her research, and also with the view expressed by ACAATO in its 1998 brief.

Two developments in 1995 and 1996 increased the likelihood of a positive response to the 1998 ACAATO request that colleges be enabled to award baccalaureate degrees. One was the election of a Progressive Conservative Government under the leadership of Mike Harris in June, 1995. The other was the decision of the Harris Government in 1996 to abolish the Ontario Council on University Affairs. One of the Harris Government's major goals was to make the province more economically competitive in the global arena (Courchene & Telmer, 1998, cited in Young, 2002), and it believed that greater reliance on market forces within the higher education sector would contribute to that end (Young, 2002). One element of this strategy was the government's introduction of mandatory reporting of key performance indicators which it was believed would improve the functioning of the higher education market (Lang 2013). A bolder, more controversial way of giving greater rein to market forces in higher education would be to reduce some of the restrictions on entry into the market, particularly the market for degree level education, which was the most regulated part of the higher education market. Under the Degree Granting Act, an Ontario-based institution required an Act of the Legislature in order to award degrees, and the policy position of previous governments of all political parties was not to allow private degree granting institutions, nor - with only rare exceptions - to allow new public ones either. To reduce this barrier, the Harris Government introduced legislation, the Postsecondary Education Choice and Excellence Act, 2000, that allowed both private institutions and the public colleges to award degrees, and provided a means for these institutions to obtain approval of new degree programs without having to go through the Legislature.

The Ontario Council on University Affairs had been abolished earlier in the tenure of the Harris Government along with 21 other agencies in a move that the government claimed would save almost 3 million dollars over two years (Doucet 2004). It is perhaps unlikely that a government that was sufficiently committed to a major reform of higher education would be deterred from doing so by non-binding advice from an advisory agency. However, as OCUA had been a stout defender of a traditional- and its critics would say, narrow - view of who should be allowed to award degrees, its absence made the path to enactment of the new legislation easier.

Different interpretations of the reasons for allowing colleges to award degrees abound. Some say it was to further the government's neo-liberal agenda (Fisher et al. 2009). The Minister of Training, Colleges and Universities, Diane Cunningham, said it was "to increase the choices available to students to earn a degree" (Cunningham 2000: 1). Curiously, the Minister's statement in the Legislature did not mention an economic rationale for the new degrees, although the consultation paper released earlier by the Ministry did refer to employer needs, though not until page 6 of the document (Ontario Ministry of Training, Colleges and Universities, 2000). Panacci said that the two major reasons were to address economic and labour market needs, and to provide increased access to degree programs (Panacci,

2014). In Galea's study of the perceptions of governmental and institutional leaders, the top three reasons were: responding to labour market needs; lobbying by the college presidents; and the combination of "limited university transfer options and student demand" (Galea 2015: 83).

If one were to apply the theoretical frameworks offered by Brint and Karabel (1989) and Dougherty (1994) to explain the shift away from academic toward vocational programs in American community colleges to the introduction of baccalaureate programs in Ontario colleges, the three factors identified by Galea would correspond to the consumer demand, business domination, and institutionalist explanations offered by these authors (Skolnik 2009). However, Dougherty denied that the interests of a single group – students, employers, or college administrators – were the decisive influence in the vocationalization of community college programming. He pointed instead to the importance of the role of government officials and their ideological perspectives (Dougherty, 1994). The analogous position in the case of the college baccalaureate degree in Ontario would be that of Jones (2004) who attributed the dominant influence to the government's neo-liberal agenda in higher education.

Neither the Minister's statement in the Legislature when introducing the Postsecondary Education Choice and Excellence Act, nor her remarks about her motives when interviewed years later by Galea (2015) provide textual support for an ideological interpretation. When asked by Galea about the reasons for the reform, Ms. Cunningham recalled that at the time "it was very difficult [for college students] to obtain degree granting at any existing postsecondary institutions" (Galea, 2015:86). However, even if the Minister's approach was more pragmatic than ideological, this is not to say that the government's support for the initiative was not rooted in its ideology. Breaking the monopoly of the public universities over degree granting constituted a major change in a policy position that until the Harris Government had been shared by all three political parties. Thus, it is quite possible that this reform would not have been made, or at least not at the time that it was made, had it not been for the election of a government that was strongly committed to extending the market mechanism into the public sector.

The applied degree issue

The Postsecondary Education Choice and Excellence Act, 2000 gives a college the opportunity to award "a baccalaureate degree in an applied area of study" (Government of Ontario 2000). Nowhere in the Act is there mention of an "applied degree". Nevertheless, it soon became common to refer to the baccalaureate degrees awarded by Ontario colleges as applied degrees. For example, reflecting the terminology that she heard in her interviews in the colleges, Vigil Laden entitled her book chapter about the college degrees, "The new ABDs: Applied baccalaureate degrees in Ontario" (Vigil Laden 2005). Similarly, Panacci regularly refers to "applied degrees" or "applied baccalaureate degrees" in commenting on the degrees awarded by the colleges (Panacci 2014). Hurley and Sá coined their own abbreviation, B.Ap., for applied baccalaureate degree, when referring to Ontario college degrees (Hurley and Sá 2013). The Ministry itself even used the term applied degrees in some documents (Ministry of Training Colleges and Universities 2003). One of the authors of this report recalls several occasions in the early 2000s at gatherings of college personnel to discuss the degrees, when a participant would correct speakers who used the term "applied degree" and encourage them instead to use the wording of legislation. However, the term applied degree ultimately became ubiquitous.

The tendency to refer to college baccalaureate degrees as applied degrees was reinforced by a practice of the Postsecondary Education Quality Assurance Board (PEQAB), the agency that was assigned by the legislation the responsibility for assessing applications from colleges to award degrees. Prior to 2009, the Board required the title of a college degree to contain the word "applied". In the Board's 2006

Handbook for Ontario Colleges, all the examples of degree titles given in the section on Nomenclature of Degrees contain the word applied, e.g., Bachelor of Applied Business, Bachelor of Applied Environmental Studies, or Bachelor of Applied Information Sciences (PEQAB 2006).

The significance of the modifier "applied" in front of the word "degree" is that it may give the connotation that the Ontario college baccalaureate degree is a new type of credential that does not have the same recognition as a degree that omits that modifier. An example of a degree that has this connotation is the Alberta applied degree which, as described earlier, is perceived differently than other baccalaureate degrees in that province. The basis for the difference in the way the Alberta applied degree is perceived is provided in the description of the nature of and requirements for different degrees in the handbook of the agency that assesses applications to offer degree programs in Alberta, the Campus Alberta Quality Council (Campus Alberta Quality Council 2011). The CAQC Handbook indicates considerable differences between the Alberta applied degree and other baccalaureate degrees. For example, faculty qualifications requirements are different for applied degrees than for other baccalaureate degrees (Campus Alberta Quality Council, 2011: 82).

In contrast to Alberta, in Ontario the degree standards are exactly the same for college baccalaureate degrees and university baccalaureate degrees. Both kinds of degrees must meet the requirements of the Ontario Qualifications Framework (Ministry of Training Colleges and Universities 2009). There are only two baccalaureate degrees in the Ontario Qualifications Framework: the Baccalaureate Degree and the Honours Baccalaureate Degree. Baccalaureate degrees awarded by Ontario colleges must meet the Qualifications Standards of the Honours Baccalaureate Degree. Since programs of both sectors have to meet the same degree standards, and since university degrees in applied fields of study did not have to use the word applied in their degree titles, it was hard to defend imposing this requirement on colleges. Accordingly, in 2009, the requirement for use of the word applied in the titles of college degrees was eliminated (Colleges Ontario 2009).

Until 2016 colleges were not allowed to use the word Honours in their degree titles, even though their degrees must meet all the standards of an Honours Baccalaureate Degree. The rationale for the restriction was that the word Honours was not appropriate for college degrees because they were offered only in applied areas of study, and hence were not "research oriented degrees" (PEQAB 2010: 26). Colleges complained that this was prejudicial since universities were allowed to use the term Honours in the titles of their degrees even in applied areas of study. There were two problems with the rationale for this restriction. One is that the Act does not prohibit colleges from offering research-oriented degrees in applied areas of study. The Act says only that college degrees must be in applied areas of study. Of course, offering research-oriented degrees may not fit with the colleges' mandate, and there is no indication that they want to do so. The second problem is that the Qualifications Standards for the Honours Baccalaureate Degree in Ontario do not differentiate between research-oriented and other types of degrees. These standards do, however, make training in research methods a necessary part of the curriculum of all Honours Baccalaureate Degrees, including those awarded by the colleges. Apparently the PEQAB came to agree with the colleges' argument on this, as the restriction on the use of the term Honours does not appear in the 2016 Handbook for Colleges (PEQAB 2016a).

Ironically, however, colleges are still prohibited from using the degree title Bachelor of Applied Science, because that title is said to "connote[s] research-oriented degrees" (Postsecondary Education Quality Assessment Board, 2016:28). However, since this argument proved unsuccessful in defending the restriction on the use of the word Honours, it is difficult to see how it could withstand a challenge of the restriction on the use of Bachelor of Applied Science, should the colleges wish to make such a challenge.

Be that as it may, the elimination of the requirement to use the word applied in the titles of college degrees and the decision to allow the colleges to use the word Honours are consistent with the notion that colleges award the same type of bachelor degrees as universities, rather than a different type of degree as is the case in Alberta. In this respect, the situation in Ontario is like that in the United States, where college bachelor degrees and university bachelor degrees within a region are subject to the same standards and review processes of the region's accreditation agency.

College degrees and institutional differentiation

Earlier it was noted that in both British Columbia and Alberta the development of the college baccalaureate degree was accompanied by changes in the status of some colleges. In British Columbia this occurred in two stages, with some colleges first becoming university-colleges, and subsequently the conversion of the university-colleges and one college into universities. In Alberta, some colleges were designated as universities and others as polytechnic institutions. The corresponding changes in Ontario were more modest.

On February 10, 2003, less than one year after the first approvals were granted for college baccalaureate programs, the government announced a new designation for which colleges could be considered, that of Institute of Technology and Advanced Learning (Ontario Ministry of Training, Colleges and Universities, 2003). The ITALs, as they came to be called, would be allowed to have up to 15% of their programming in bachelor degrees, whereas the ceiling for other colleges was 5%. Also, ITALs were to "increase flexibility for diploma graduates to complete bachelor programs and apprentices to complete diploma programs"; have "increased emphasis on industry . . . support for new programs"; and have "increased involvement in applied research through partnerships" (Ontario Ministry of Training, Colleges and Universities, 2003: 1). However, ITALs were to be able to develop in the ways indicated without additional provincial funding.

Nor did the government support progress toward the objectives for the ITALs in other ways. The absence of measures to support the stated intentions is particularly noticeable in regard to the desire for increased flexibility for students to move from diploma to degree programs. The Minister could have instructed the PEQAB to make special allowance in this regard for ITALs compared to other colleges, but did not do so. In proposing arrangements for movement of students between diploma and degree programs, the ITALs have to satisfy the exact same conditions as do other colleges. Except for the lower ceiling on bachelor programs, there was nothing to prevent non-ITAL colleges from pursuing the same objectives as were indicated for ITALs.

Initially three colleges – Conestoga, Humber and Sheridan – obtained the ITAL designation. Shortly thereafter, two other colleges – George Brown and Seneca – acquired ITAL status but chose not to use the name. Figures reported by the Higher Education Quality Council of Ontario showed that as of 2011, about 85% of enrolment in college bachelor programs was in the five ITALs (Higher Education Quality Council of Ontario, 2013). HEQCO concluded that "degree granting emerges as the most important distinguishing feature in contemplating formal differentiation between colleges" (Higher Education Quality Council of Ontario 2013: 3). As enrolment in degree programs in the colleges has been growing much faster than enrolment in any other types of program, degree granting is likely to become even more prominent in the future as a distinguishing feature in differentiation within the college system.

Implications for system design

In Canada, the USA, the UK and other Commonwealth jurisdictions there is an apparently neat division between baccalaureates and other long cycle higher education programs of at least three years' duration which have been mainly the responsibility of universities; and diplomas, associate degrees or other short cycle higher education of two years or less which are the responsibility of colleges. Ontario's three year advanced diplomas already transgress this apparently neat boundary. Ontario's three year advanced diplomas were 25% of colleges' provision in 2015, while 2 year diplomas were 50% of provision (see Appendix 3). Singapore's polytechnics also offer three year advanced diplomas and are the primary credential they offer.

So rather than conceiving of postsecondary education as bifurcated into a university and college sector, we suggest that post compulsory education is a continuum, at least in principle, from training to short cycle/vocational higher education, through long cycle/disciplinary higher education and to advanced higher education/research (Figure 1). By 'training' we mean the development of knowledge and skills which is heavily embedded in work: it is related directly to work and at least part is often located at work places. Apprenticeships are a form of traditional training which has been formalised in indentures, highly structured and of long duration, normally of four years. More recent forms of training are likely to be one year or shorter and to be less formal, less structured, and are less likely to be recognised by educational qualifications. Short cycle higher education is typically from one to two years and may be more or less embedded in work or disciplines but in Ontario, for example, is more likely to be embedded in work. Long cycle higher education is typically from three to four years and may be more or less embedded in work or disciplines but in Ontario universities, for example, is more likely to be embedded in disciplines. Advanced and/or research based higher education almost invariably builds on long cycle higher education and is usually though not always embedded in a discipline.

Figure 1: A continuum of post compulsory education provision

Provision

Advanced/research

Long cycle/disciplinary

Short cycle/vocational

Training

Some institutions, such as Australia's 'dual sector' universities, offer all forms and levels of post compulsory education from PhD to training and indeed including post compulsory secondary education. But generally, including in Australia, the continuum is divided into more or less distinct sectors. For example, USA federal data distinguishes between less than two year institutions which we understand

to offer mostly training, two year institutions which offer short cycle higher education and four year institutions which offer long cycle higher education, and we note that these sectors are sharply differentiated by public, private not for profit, and private for profit control (Table 2).

Table 2: Percentage of enrolments in degree granting and non-degree granting postsecondary institutions by control and level of institution, USA, fall 2014

Level of institution	Public	Private not for profit	Private for profit	Total
4 year	61	29	9	99
2 year	94	5	1	100
Less than 2 year	16	3	81	100

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2014, Human Resources component; Spring 2015, Fall Enrollment component; and Fall 2014, Completions component. (This table was prepared April 2016.)

However, this segmentation is different in different jurisdictions, and even within one jurisdiction segmentations may change over time. Figure 2 is an idealised depiction of the segmentation of post compulsory sectors in three jurisdictions. It shows Ontario following the pattern shown by USA federal data in Table 2 above. Ontario colleges offer mostly vocational short cycle higher education. They also offer apprenticeships and some other training, but most non apprenticeship training is provided by private career colleges (Colleges Ontario 2016) whose financing, accreditation and quality assurance is different from short cycle vocational education offered by colleges. In contrast, in Australia training and short cycle vocational education has the same curriculum, accreditation and quality assurance. There are differences in emphasis in financing, in the site of provision and in the providers of training and vocational education in Australia, but these differences in tendency are neither sharp nor formal. This has advantages in principle, but in practice has greatly weakened the educational component and role of Australian short cycle vocational education.

Neither Ontario nor Australia formally distinguishes between long cycle disciplinary higher education offered by universities and advanced research higher education which is offered by the same universities. In both jurisdictions there are advocates for a formal segmentation between long cycle disciplinary higher education and advanced research higher education on the model of the State University of California system which offers mostly long cycle disciplinary higher education and the University of California system which also offers advanced research higher education (Clark et al. 2009, Fallis 2013).

Many countries of continental Europe formally distinguish long cycle higher education with a mainly disciplinary orientation which is offered by universities which also offer advanced research oriented higher education, from the provision shaded in Figure 2: long cycle vocationally oriented higher education offered by *Fachhochschulen* (FHS, in Germany), *Ammattiakorkeakoulut* (AMKs, in Finland), *instituts universitaires professionnalisès* (IUPs, in France), and *Hogescholen* (which offer *Hoger Beroeps Onderwijs* or higher professional education, HBO, in the Netherlands). These institutions are not authorised to offer advanced research oriented higher education.

Figure 2: Three idealised segmentations of post compulsory education

Australia	Continental Europe		Ontario
Advanced/research	Advanced/research		Advanced/research
Long cycle disciplinary and vocational	**Long cycle vocational**	Long cycle disciplinary	Long cycle disciplinary
Short cycle/ vocational	Short cycle/ vocational		Short cycle/ vocational
Training	Training		Training

Governments in the UK and Australia established a special sector to offer the segment shaded in Figure 2 of long cycle vocation education. In the 1960s the UK and Australia reorganised higher level vocational education institutions into a distinct sector of polytechnics in the UK and colleges of advanced education in Australia which offered only long cycle vocationally oriented higher education, which initially were only diplomas and advanced diplomas, and soon after their foundation were extended to applied baccalaureates (Wheelahan et al. 2009b). These institutions and qualifications were incorporated within the UK's and Australia's university sector in the 1990s, which resulted in university sectors which included many institutions which are more deeply embedded in work than more traditional universities, and whose baccalaureates are more vocational than traditional university baccalaureates. It also left a college sector in the UK and Australia which was much weakened, with relatively recently established universities offering qualifications corresponding to those offered by higher level colleges half a century earlier. While the colleges' qualifications of the 1950s were called diplomas, they served similar roles and had similar occupational outcomes such as recognition by professional engineering bodies as many contemporary degrees.

By offering baccalaureates Ontario colleges are serving a role in providing long cycle vocational education which used to be fulfilled by polytechnics in the UK and which is currently filled by analogue institutions in much of continental Europe. This complements Canadian colleges' role in fostering innovation supported by the Community and College Social Innovation Fund (through the Social Sciences and Humanities Research Council) and the College and Community Innovation Program (through the National Sciences and Engineering Research Council of Canada), a role which European polytechnics also serve. This may be designed into Ontario's postsecondary education system by revisiting the two models which Skolnik (2016c) identified as informing the development or reorganisation of colleges in many North American and western European jurisdictions in the 1960s.

Many jurisdictions in North America, typically California in the USA and British Columbia in Canada, established or reorganised their colleges to have a major role in preparing their graduates for transfer to universities. Skolnik describes the North American model as hierarchical, since colleges and universities

are in a hierarchical relationship: colleges offer lower qualifications which may transfer to higher level qualifications offered by universities. This is illustrated in Figure 3 where triangles represent universities and rectangles represent colleges. In the hierarchical model colleges offer academic or disciplinary oriented studies similarly to universities, though they usually also offer work oriented studies. In different manifestations of the hierarchical model the college sector may have many more students than the university sector as in California, or many fewer students as in New York; colleges and universities may be more or less close to each other geographically, in curriculum and in coordinating their admissions; all of which affects the number of students who transfer and the ease with which they do so.

Many jurisdictions in continental Europe established or reorganised their colleges to offer only or mostly qualifications which prepare graduates for work. Since their curriculum is so different from universities which are strongly oriented towards disciplinary study, there is very little opportunity for students to transfer between the sectors. So opportunities are provided for students to extend their vocational studies in the vocational sector. Skolnik describes the European model as parallel, since colleges and universities are in a parallel relationship.

Figure 3: Hierarchical and parallel system designs

Hierarchical   Parallel
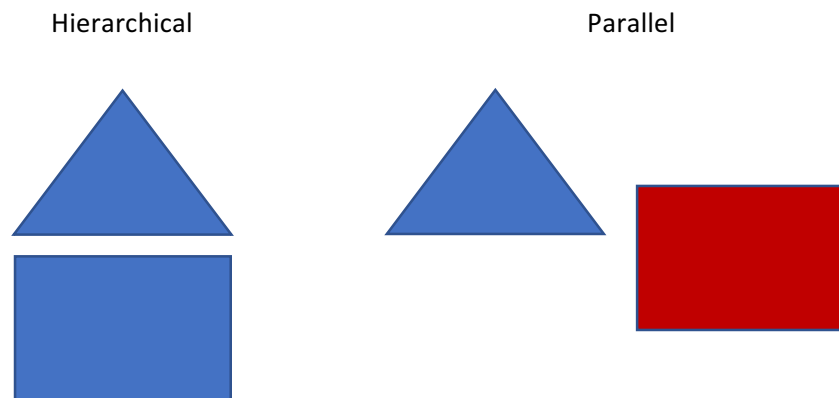
Skolnik (2016c: 44) observes that 'In several ways the original vision for Ontario's colleges was closer to the parallel model developed in a number of European countries than it was to the vertical model developed in the United States.' However, Skolnik notes that Ontario has not developed its postsecondary education strongly on the parallel model. The development of baccalaureates in colleges with their applied orientation and greater immersion in practice could be understood as a modest progression of the parallel model, rather than a potential overlap of the boundary between colleges and universities on the hierarchical model. Modest, because Ontario's college baccalaureates are still restricted in the ways we have described. Modest also because many European jurisdictions have much better development provision of long cycle vocational education, with vocational masters now a well established provision of the college sector.

3. Scale, accreditation and quality assurance

This chapter examines the scale of degree offerings by colleges in Ontario, how enrolments have changed over time, and the fields in which degrees are offered. The second section outlines the process of accreditation and it explains the way in which the regulations shape colleges' degrees. The final section is a discussion of perceptions of policy leaders in Ontario and college institutional leaders' perceptions of the nature of the accreditation and quality assurance process.

Scale of degree offerings by colleges in Ontario

Some 13 of Ontario's 24 colleges are authorised to offer 108 degrees. Table 3 shows the number of degrees in each Ontario college as of September 2016.[5] Many colleges also offer degrees in partnership with universities, but in these cases, the degrees are awarded and accredited by their partner university. This is particularly the case in nursing, where 17 of Ontario's 24 colleges offer nursing in collaboration with their university partners.[6]

The five colleges that are designated as Institutes of Technology and Advanced Learning (ITALs) are Humber, Sheridan, Seneca, Conestoga and George Brown. They can offer up to 15% of their programming as degrees, while the remaining Colleges of Applied Arts and Technology (CAATs) can offer up to 5% of their programming as degrees. Together, the five ITALs account for 73% of degrees offered by colleges in Ontario. Fanshawe, which is not an ITAL, has two more degrees accredited than George Brown, which is an ITAL, while Algonquin and Georgian (also not ITALs) have a similar number of degrees accredited as George Brown. However, Table 3 also shows the students who are undertaking degrees in each college as a percentage of total students in 2013/2014 (Woodhead 2017: 96). The ITALs accounted for 86.6% of all degree students in colleges in 2013/2014, and George Brown's percentage of degree students is higher than in any of the CAATs (Woodhead 2017: derived from Table B-1: 96). It is clear that the ITALs have bigger baccalaureate programs than CAATs, which is inevitably going to be the case since the CAATs are more constrained in the number of degrees they can offer, and hence the number of students they can enrol in those degrees.

Table 3 also shows that while a college may have an accredited degree, that they may not actively offer the credential. For example, while La Cité has two degrees accredited, it advertises only one on its website (a bachelor's in biotechnology), and College Boréal does not advertise its accredited degree on its website.[7] Again, this is inevitably going to be the case as colleges' overall offerings are dynamic and change in response to student, local community and industry needs, and changes in demand for credentials. It will also take colleges some time to experiment with the type of degrees that suit their constituencies.

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[5] See Colleges Ontario's website for a list of all 24 colleges in Ontario: http://www.collegesontario.org/directory/college-contacts.html. Viewed 9 June 2017.
[6] See Colleges Ontario's website for a list of nursing degrees offered by Ontario's colleges in partnership with universities: http://www.ontariocolleges.ca/SearchResults/HEALTH-FOOD-MEDICAL-NURSING/_/N-lo8d viewed 9 June 2017
[7] For La Cité see http://www.collegelacite.ca/programmes/ viewed 11 June 2017 and for Collège Boréal see: http://www.collegeboreal.ca/programs-and-courses/ viewed 11 June 2017.

Table 3: Number of degrees in each Ontario college as of September 2016 & percentage of degree students in each college that offered degrees in 2013/2014

College	Number of baccalaureate programs in 2016	Degree students as a percentage of total students in 2013/14**
Humber*	26	16.8%
Sheridan*	22	18.9%
Seneca*	13	10%
Conestoga*	12	8.5%
Fanshawe	8	1.5%
Algonquin	6	2.2%
George Brown*	6	5.3%
Georgian	5	4.4%
Centennial	3	0.6%
Niagara	3	2.2%
La Cité	2	1.7%
Collège Boréal	1	0%
St. Lawrence	1	4.5%
Total	**108**	**5.7%**

Note: The number does not include college-university collaborative programs where colleges offer university accredited degrees in partnership with universities.
* indicates that the college is designated as an Institute of Technology and Advanced Learning and can offer up to 15% of its programming as degrees.
** Source: Woodhead (2017: 96). Note, these percentages are for 2013/2014, while the percentages reported in Table 4 are for 2006 and 2015.

Table 4 shows the relative share of enrolments for each type of credential offered by colleges in 2006 and 2015. The first degrees were offered in 2002 and so the first main group of graduates would have graduated in 2006. Since 2006, enrolments in graduate certificates[8] and degrees have grown much faster compared to other credential types (188% and 237% respectively) and they have increased their overall share of enrolments (6.2% and 6.5% respectively). While the overall share of enrolments is still modest, their rapid rate of growth shows that there is considerable interest in these credentials. College degrees are 4% of all under-graduate degrees offered in Ontario.[9]

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[8] The entry requirements for graduate certificates are a diploma or advanced diploma or bachelor , [degree or just having been in a bachelor program for some length of time?] and their purpose is to provide specific knowledge and skills related to an applied occupational area. While colleges refer to these credentials as graduate certificates, they are designated as post-diploma certificates on the Ontario Qualifications Framework. See: http://www.tcu.gov.on.ca/pepg/programs/oqf/certificate9.html viewed 9 June 2017. See Thorsell (2015) for a discussion of graduate certificates in Ontario.
[9] Derived from Common University Data Ontario (CUDO): https://cudo.ouac.on.ca/ accessed 29 May 2017.

Table 4: Enrolments in college credentials 2006 & 2015, & percentage growth 2006 - 2015

Credential	2006	% of enrolments 2006	2015	% of enrolments 2015	% growth 2006-2015
Certificates	16,241	10.4	25,952	11.6	59.8
Diplomas	76,539	49.2	111,473	50.0	45.6
Advanced diplomas	43,870	28.2	56,192	25.2	28.1
Graduate certificates	4,782	3.1	13,755	6.2	187.6
Degrees	4,278	2.7	14,395	6.5	236.5
Unknown[10]	9,575	6.2	892	0.4	-90.7
Other	349	0.2	128	0.1	-63.3
Total	**155,634**	**100**	**222,787**	**100**	**43.3**

There is a marked difference between field of study for students enrolled in degrees and all college student enrolments. Table 5 shows the distribution of enrolments by field of study for students enrolled in degrees and all students. Applied arts has the greatest share of student enrolments in degrees, almost half, and applied arts' share of college baccalaureate enrolments (42.6%) is much higher than their share of all college enrolments (32.5%). Business' share of baccalaureate enrolments (34.7%) also is well above its share of all college enrolments (27.4%). Enrolments in degrees in health are substantially lower than in health credentials offered in colleges overall (4.4% cf. 14.7%). This may be because colleges are not permitted to offer their own nursing degrees which lead to occupational designation as a registered nurse. As explained above, colleges offer nursing degrees in partnership with universities, but the credentials in which students are enrolled are university credentials. Colleges train registered practical nurses which requires a diploma and they offer pre-health science programs which prepare students to enter higher-level health programs – together these enrolments would increase the share of college students' enrolments in the health field of study.

Table 5 also shows that enrolments in technology are lower for degree students than for all students; however, many of the degrees offered by colleges in other fields incorporate components that include technology. For example, the Bachelor of Applied Arts (Interior Design), the Bachelor of Applied Arts (Animation), the Bachelor of Applied Arts (Film and Media Production) and the Bachelor of Applied Arts (Illustration) are all classified as applied arts, though they incorporate technology studies. This reflects the applied and inter-disciplinary nature of college degrees and the fact that they don't easily fit into one category.

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[10] The relatively high share of 'unknowns' in 2006 in Table 4 is some cause for concern, as it is unclear if it would change the relative share of enrolments by graduate certificates and degrees or if these enrolments would be shared evenly across all credential types.

Table 5 Percentage share of enrolments by field of education by degrees and all enrolments in 2015

Fields of study	% share of enrolments by FoS	
	% of degree student enrolments	% of all student enrolments
Applied arts	46.2%	32.5%
Business	34.7%	27.4%
Health	4.4%	14.7%
Technology	14.7%	23.9%
Grand total	100.0%	100.0%

Accreditation and quality assurance processes for degrees in colleges

All colleges have internal processes to develop new proposals for their credentials, which include certificates, diplomas, advanced diplomas, graduate certificates and degrees. This means that there is coherence in the way in which colleges develop their suite of credentials within different fields of study, and how they construct a credentials profile that includes a ladder of credentials (and hence the possibility for pathways) within each field. All credentials must comply with the specifications in the Ontario Qualifications Framework (OQF)[11] which specify in very broad terms the following characteristics:

- Overall program design and outcome emphasis
- Preparation for employment and further study
- Typical duration of the program
- Admission requirements
- Provider type that delivers the credential[12]
- Depth and breadth of knowledge
- Conceptual and methodological awareness/research and scholarship
- Communication skills
- Application of knowledge
- Professional capacity/autonomy
- Awareness of limits of knowledge.

However, even though all credentials offered in colleges must meet the requirements of the OQF (and indeed, universities' credentials must also do so), the accreditation and approval process for degrees in colleges is quite different from all other college credentials. For all credentials other than degrees, once they have completed their internal development, quality assurance and approval processes, colleges must submit their proposals to the Credential Validation Service which is managed by the Ontario College Quality Assurance Service, a body which is collectively owned by Ontario's colleges.[13] Colleges

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[11] See: http://www.tcu.gov.on.ca/pepg/programs/oqf/oqf.pdf viewed 11 June 2017. The OQF has more descriptors than most other qualifications frameworks, even though they are very general in nature.

[12] The Ontario Qualifications Framework distinguishes between college level credentials that are offered by publicly funded colleges and private career colleges. We know of no other regional or national qualifications framework that makes this distinction.

[13] See the Credentials Validation Service: http://www.ocqas.org/credentials-validation-service/ viewed 11 June

must meet or exceed the Ministry's expectations and requirements for credentials, which includes essential employability skills outcomes and the relevant vocational program outcomes mandated by the Ministry. Once approved through this process, the submission for the new credential must be approved for funding by the Ministry of Advanced Education and Skills Development. These processes have been in place for some time, and colleges have well developed internal processes to meet these requirements and these processes are institutionalised and naturalised – they are the default normal processes.

The program approval process is quite different for college degrees, and a different body, the Postsecondary Education Quality Assessment Board (PEQAB) must review and make a recommendation to the Ministry under the *2000 Postsecondary Education Choice and Excellence Act* (which was the Act that first granted authority for colleges to offer degrees) for approval of all applications for college degrees and for all other postsecondary institutions that are not Ontario universities.[14] The first step in the process is for colleges to submit their application to the Ministry, which the determines whether the application falls under the Act, and then the Minister must decide, for each application which falls under the Act, whether and how to refer it to PEQAB (PEQAB 2016a: 10). According to our interviewees, this step of the process can take about four months. Once an application has been forwarded to PEQAB, it will commence the process of review and PEQAB states that this process also takes about four months.[15] However, while this is the case, interviewees from colleges said that the process often takes longer.

Colleges must prepare a very detailed submission and submit it to the Ministry (PEQAB 2016b). Among other things, colleges have to justify and explain: the economic need for the program; their capacity to deliver the credential; if there is regulation or accreditation by professional bodies or relevant regulatory bodies; the extent to which the program will "maximize the graduates' potential for employment and promotion in their field and further study" (p.11); admission requirements; how the program will be evaluated and quality assurance processes; how the college will protect students' interests; and, whether the program duplicates programs "normally offered by Ontario universities and colleges or contributes to unwarranted raising of credentials among similar programs in the college system." They also have to demonstrate that they have "policies, procedures, and practices that encourage academic honesty and integrity" (p.12) and an evaluation is made to determine that they "maintain an atmosphere in which academic freedom exists, and in which students and academic staff are expected to display a high degree of intellectual independence."

Colleges must provide detailed information on program content, which includes: identifying the membership of the Program Advisory Committee which is the external body that comprises relevant industry experts who advise the college about the requirements of their field; learning outcomes; course descriptions, course outlines and the list of faculty who will teach in the program or a statement about faculty to be hired to teach in the program; and requirements for work-integrated learning.

Once PEQAB receives an application for a degree it will post the application on its website for public comment on the application. PEQAB will establish an expert panel to undertake the assessment which will assess the application and undertake a site visit. Members of the panel are selected based on their expertise that is relevant for the particular degree, and in the past this meant that panel members were

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2017.
[14] This includes universities that are from outside Ontario, and public, not-for-profit, and for-profit institutions inside and outside Ontario. Institutions must be granted approval to operate as institutions to operate in Ontario, and each degree they wish to offer must be accredited.
[15] See PEQAB's website: http://www.peqab.ca/About.html viewed June 11 2017.

predominately from universities. Even though the majority of panel members will still be from universities, PEQAB has in recent years tried to identify potential panel members with a college affiliation, particularly through liaising with the College Degree Operating Group, which comprises representatives from Ontario colleges who work together to develop policy for colleges and to develop system-wide responses on behalf of colleges. The PEQAB assessment panel will submit its report, and the college has an opportunity to respond to the report. Once this process is complete, PEQAB will formulate a recommendation to the Minister on whether the program should be approved. PEQAB's (2016a) *Handbook for Ontario Colleges* explains that colleges must bear the cost of the assessment carried out by the board, which normally ranges between $7000 - $11,000 for a full program quality review. This does not include the costs the college incurs in developing the degree or their submission for approval.

Colleges reported that PEQAB's requirements were onerous. This research did not test this claim. The team reviewed colleges' applications for new baccalaureates which were under review at the end of June 2017. The mean size of applications was 302 pages, but there was a very high standard deviation of 199 pages, indicating great variation in the size of applications. Thus, three applications were fewer than 200 pages and three applications were more than double that size with more than 400 pages. One may anticipation variations by field, but even in one broad field a college's application for a Bachelor of Engineering - Power Systems Engineering of 467 pages was almost twice the length of the application for a Bachelor of Engineering (Electrical Engineering) of 235 pages, the Bachelor of Energy Engineering Systems Management of 245 pages, and it was 1.6 times the size of the application for a Bachelor of Engineering (Mechanical Engineering) of 282 pages. The biggest application was for a Bachelor of Health Care Technology Management, which took 987 pages. In contrast, an application for a Bachelor of Technology (Digital Health) (Honours) was almost a quarter of the size at 249 pages.

There is, of course, nothing wrong in principle with very big submissions nor with a great variation in the size of submissions. But perhaps there are opportunities for reducing colleges' work in preparing submissions and PEQAB's work in reviewing them by PEQAB stating its expectations for the length of submissions. Presumably applicants may have opportunities to submit any additional information sought by an expert panel, which may be reviewed by the panel's chair, a PEQAB officer or by circulation amongst expert panel members to avoid the delay of having to convey a subsequent meeting of the panel.

What's in a title?

College degrees are equivalent to university degrees because both must meet the same standards as specified in the Ontario Qualifications Framework. There is not one standard for college degrees and another for university degrees. Universities offer mostly four-year 'honours degrees', even though they have the authority to also offer three-year bachelor degrees. Despite vigorous advocacy by Colleges Ontario commencing in 2012 that colleges be permitted to offer three-year degrees, they are not permitted to do so and all college degrees must be four year degrees (Skolnik 2016c: 48).

When colleges were first granted authority to offer degrees, they were required to include in the title the term "Applied Degree". This was to differentiate college degrees from degrees offered by universities, to ensure that colleges met the requirement that their degrees be in an applied area of study and to avoid duplication of provision between colleges and universities. However, in 2009, the requirement that colleges include the word 'applied' in their degrees was removed (Skolnik 2016b), and as we observed in the previous chapter. While this is so, it was not until 2016, as Skolnik (2016b: 5),

explains, that colleges were able to use the word 'honours' in their degree titles even though their degrees were required to meet the same standards as university degrees. The rationale for prohibiting colleges from using the word 'honours' in their degree titles was that they were in applied areas of study, and not 'research oriented degrees' (Skolnik 2016b). Skolnik (2016b: 6) explains that colleges complained that this was prejudicial "since universities were allowed to use the term Honours in the titles of their degrees even in applied areas of study." This was because programs in both sectors had to meet the same standards, and no restriction was placed on universities in the way they titled their degrees. Like universities, colleges must include research training as a necessary part of the curriculum in their honours baccalaureates. This is relevant in debates about whether graduates of college degrees should have access to masters programs, which is discussed in the next chapters seven and eight.

Even though colleges now have greater freedom in the way in which they title their degrees, the PEQAB Handbook stipulates that college degrees must be in an applied area of study, and include a minimum of 14 weeks of paid, full-time equivalent work related to the professional field of study (or equivalent unpaid work if paid work is not feasible). Again, no such requirement is made of universities. However, many universities now choose to include work placements in their degrees and promote this as a point of distinction about their credential, field or university[16], or it may be a condition of accreditation by a professional body (for example, in nursing). The key difference is that the *university* makes these decisions (with the exception of accreditation by professional bodies), while colleges *must* comply with these conditions.

Faculty requirements

PEQAB (2016a: 25-26) also requires evidence that those teaching in degrees will have the necessary professional credentials *and related work experience*; hold an academic credential *in the program field or a closely related field/disciple* that is at least one level higher than the degree; and engage in "scholarship, research or creative activity to ensure their currency in the field". These requirements apply to faculty in core and non-core (usually breadth components) of the degree.

A further requirement of PEQAB is that at least 50% of teaching in the core and non-core areas in degrees be undertaken by faculty with a terminal credential in the field of their teaching or a closely related field, usually a doctorate. This means that all faculty teaching in degrees must have at least a masters degree, but that 50% of teaching is undertaken by faculty with a relevant doctorate. However, the wording in the *Handbook* is careful: 50% of the students' *experience* in the professional or main field of study must be in courses taught by faculty with a terminal credential in the field, which is not the same as saying that 50% of all *faculty* teaching in the program must have a doctorate. As is discussed in the next chapter, a particular challenge that colleges face is recruiting faculty who have the necessary combination of work experience and academic credentials (a doctorate), and who are prepared to engage in the level of scholarship needed to maintain currency (let alone engage in applied research) while maintaining high teaching loads.

Ontario is an outlier in the accrediting body's strength and prescriptiveness of the qualifications of faculty teaching in college baccalaureates. In a study of 12 other jurisdictions, only Florida had a numerical requirement for doctorates for teaching in a bachelor degree program in an applied field of study, and that was 25%. In Australia, teachers teaching in degrees in technical and further education

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[16] Chapter four which compares and contrasts curriculum in college degrees with universities that emphasise the experiential nature of their offerings and traditional universities.

(TAFE) institutes must have a master's degree in their field (a credential that is one level higher than the credential in which they are teaching), but there is no stipulation about the doctorate, and if there were, there would not be a similar insistence on having a relevant doctorate in the field. This is because training for the doctorate is meant to be training in research, and it is understood that those with doctorates now have the knowledge and skills they need to research a new area. This argument obviously has limits (for example, expecting someone with a PhD in physics to teach in an English literature degree), but it still has some merit (for example, someone with a PhD in education could teach in a physics or nursing or business degree). It depends on how liberally the notion of a 'relevant' terminal degree is interpreted.

This is the subject of a recommendation later in the report.

Discussion

On the one hand the accreditation process administered by PEQAB is challenging and colleges report that it is onerous, but on the other, it helps to ensure the quality and rigour of their degrees, and it constitutes a public declaration by a government body that college degrees are equivalent to university degrees. There is a lot of scope for debate and balance in the space between these two statements. Australian colleges in some states used to express very similar concerns about the accreditation of their baccalaureates. They are much happier with the new procedures implemented by the Australian Tertiary Education Tertiary Education Quality and Standards Agency (TEQSA), the authority responsible for regulating and assuring the quality of Australian higher education, including registering and re-registering providers, and accrediting and re-accrediting courses. TEQSA (2012) states that its regulatory approach is standards and risk-based and that it is guided by three regulatory principles - regulatory necessity, reflecting risk and proportionate regulation. This means that providers which build up a record of high quality provision with strong compliance with standards are assessed as being of lower risk of quality failure and thus are monitored less closely by the Agency. Their applications for new programs are shorter and take less time to review. TEQSA may also grant a provider self accrediting authority for some or all of their qualifications, which offers not only formal recognition of the Agency's trust in excellent non university providers, but internalises much though of course not all the system's quality assurance for the qualifications with the provider's scope of self accreditation.

PEQAB has made some changes to its requirements in the accreditation process to accommodate colleges and it has sought to publicly endorse the quality of college degrees. For example, PEQAB has an explicit statement on its website that the quality and rigour of college degrees are equivalent to universities.[17] Indeed, it would be difficult to find a stronger statement anywhere. A component of the statement says that:

> All baccalaureate degrees offered by Ontario's Colleges of Applied Arts and Technology (CAATs) and its Institutes of Technology & Advanced Learning (ITALs) are four year (120 credit) degrees and are quality assured by an arm's length agency, the Postsecondary Education Quality Assessment Board (PEQAB), after being referred by the Minister of Advanced Education and Skills Development, Ontario… Each College degree program has been initially quality-assured, and re-assessed for renewal on a five to seven year basis, by a panel of independent subject matter experts…

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[17] See: http://www.peqab.ca/QualityONCollegeDegrees.html viewed 13 June 2017

This statement is particularly important in assuring students and their parents about the quality and standard of college degrees, and it may help convince some employers also, but it is also critical for international partnerships between colleges and other educational institutions in developing pathways or other joint arrangements, and in ensuring international recognition for college students' degrees.

PEQAB collaborates with the Colleges' Degree Operating Group in identifying appropriate members for the assessment panels, and it has increased the flexibility of work-integrated learning requirements in degrees (PEQAB 2015: 5). It has also sought to address concerns that were raised by colleges in the Crow Committee 2011 Review of PEQAB where "There is some concern from institutions that existing standards are over-weighted toward the academic culture of research universities" (Crow, Marsden, and Rubidge 2011: 18). Indeed, there was an appreciation among interviewees from colleges that PEQAB has, in recent years, gone to considerable lengths to make the process less onerous and to cut back on excessive requirements. PEQAB enjoys considerable statutory autonomy in ensuring that qualifications meet the Ontario Qualifications Framework whose requirements are stated broadly, and so has scope to further reduce the compliance burden imposed on colleges with a strong record of high quality programs and meeting PEQAB requirements.

However, the strong message coming from colleges was that the accreditation process was overly onerous and that they were being held to a higher standard than universities, in part because of the process with which they were required to adhere, and because they were *externally* accredited, whereas universities were not subject to any external accreditation, only an external audit of their quality assurance *process*. This perception was shared by several of the policy leaders we interviewed. Perhaps the exception is accreditation for professional degrees, and even here it is different because members of accreditation panels for university programs are usually drawn from the same professional community as those teaching in universities.

Moreover, even though PEQAB is very mindful of widening the pool of assessors and collaborating with colleges in finding appropriate assessors, it is still the case that the vast majority of assessors are from universities and that almost all have PhDs (see PEQAB 2017: 38). College interviewees argued that the dominance of university members on their expert panels still meant that the dominant model of the degree was the university degree, and that college degrees are compared against university (discipline) degrees and must end up looking like university degrees. They argued that this was inappropriate for *applied* degrees. This issue has also been raised in other jurisdictions in England and Australia, with colleges arguing that the dominant model against which all provision is compared is the university degree (Mixed Economy Group 2008, Wheelahan et al. 2009a). For example, one interviewee argued: "The composition of the PEQAB committees is uneven…University people don't understand the college system, and they try to impose their ideas on things that they've got no authority over, like saying that things in the collective agreement should be changed". However, this person recognised that the process has improved explaining that: "PEQAB has got better at screening committee members, and they don't include people who oppose college degrees anymore, or who are direct competitors. The college is allowed veto over committee members when there is a conflict of interest."

Several interviewees said that PEQAB's accreditation processes duplicated that of professional associations and registration bodies. A member of college faculty who taught in a baccalaureate said that "It would be so nice" if the PEQAB review and approval were combined with the review and approval of the occupational association which accredited their program, if the Ministry recognized the occupational accreditation or even if the reviews were conducted at the same time.

We pushed several of our interviewees on the issue of external PEQAB accreditation over whether college degrees involve a more onerous process than the internal processes that universities impose on their own faculty, departments and schools. It could be argued that the PEQAB process is the externalisation of internal university processes, and that university processes are just as difficult and onerous. Universities could argue that along with academic freedom, comes responsibility and particularly for peer review to ensure the quality of programs and that their internal processes reflect this. An indicative response to this point was from one interviewee who explained: "I think that it is different having an independent eye on an institution's quality processes than having an internal review that may be influenced by other politics."

This person argued that: "It was helpful for colleges when they started offering degrees to say that they meet these criteria and that these criteria are independent of the institution." This point was made by many of our interviewees, including policy leaders and institutional leaders. Initially the external quality assurance process achieved two goals: first it was fundamental in helping colleges develop the internal policies, processes, institutional infrastructure and cultures to support degrees; and second, it was (and is) fundamental as a public statement by a government body on the quality of college degrees. One policy leader explained that: "In the long run, PEQAB has helped ensure the credibility of college degrees. Colleges complained a lot about PEQAB, but maybe it has been helpful".

Colleges see the issue as one of balance and recognition of the expertise that they have developed, particularly those colleges with considerable provision and a well-developed institutional infrastructure to support degrees. It was suggested that where this was the case, that there should be greater trust in colleges. One interviewee argued that the quality assurance process for colleges that have a significant amount of provision and well-established track record should be more similar to universities. It was argued that universities' *procedures* were under scrutiny, but that the outcomes (such as curriculum, assessment, entry requirements, credentials of teaching faculty, etc) should not be under scrutiny.

This would also allow colleges to have more flexibility in matters over which universities have more flexibility such as admissions requirements, and breadth requirements. As it is, colleges admission requirements for degrees must be similar to universities (and in the final chapter we raise the possibility that this may undermine colleges' access mandate), and there are specifications about the breadth requirements that must be included in degrees. An interviewee explained:

> The breadth requirements are a challenge. Universities can set up pathways that allow them to skip some of the breadth requirements, but the PEQAB requirements are more inflexible – colleges have to have 20% breadth, and degree completion programs can take longer as a result. Diplomas have to have some general education, but universities can give more credit for that than colleges can in their degrees. Universities can offer better pathways because they don't have the PEQAB requirements for breadth.

There will always be tension in the PEQAB accreditation and quality assurance processes and these processes have evolved and will continue to evolve as a result of these tensions. Arguably, there is merit in the argument put forward by the bigger colleges with large scale provision and a well-established infrastructure that they should be trusted to a greater extent, and that the emphasis should be on whether their processes are adequate, rather than a detailed examination of each degree, and every aspect of each degree. It may still be the case that for colleges that are still in the process of developing degrees and do not yet have a track record that they will benefit from the existing processes because they will help them to develop the internal processes, policies, infrastructure and culture that is needed

to support degree provision on the one hand, and on the other, demonstrate the quality and rigour of these degrees. We return to these issues in Chapter seven that explores challenges and opportunities colleges face, and in the final chapter that discusses policy implications.

4. Curriculum and pedagogy

One of the key rationales of college degrees is that the curriculum is more applied and work-oriented and another is that pedagogy is student-focused and prepares students to be work-ready. The curricular rationale is explicitly specified in PEQAB's requirements. PEQAB's (2016a: 12) *Handbook for Ontario colleges* states that:

> The curriculum of an Ontario college degree program in an applied area of study, like those offered by most institutions in North America, is shaped by these characteristics:
> - a technical or professional education based on the fundamental principles in each field
> - application of theory to practice, of learning by doing, and of converting personal experience into knowledge and skills through laboratory, applied research, and work experience
> - cultivation of the analytical skills to evaluate new information and the ability to apply new knowledge to the field
> - a balance of professional study and general education/breadth courses to enhance students' understanding of the environment in which they will function as professionals and as educated citizens and to enhance their understanding by exposure to disciplines outside their main field of study.
>
> (PEQAB 2016a: 12)

While embracing the applied focus of their degrees, colleges also argue that their degrees are theoretically rigorous and ensure students have the theoretical grounding they need, while blending theory and practice. This is argued to be a key point of differentiation with university degrees, while also ensuring equivalence in theoretical rigour of college degrees to university degrees. However, it was also apparent in our interviews that there are perceptions that university degrees are changing, and that some universities are seeking to emphasise the experiential and applied nature of some of their degrees. Indeed, the requirements above could apply to claims made by some universities about their degrees. However, a big difference between universities and colleges is in the language of legitimation that they use in promoting their degrees. Colleges must emphasise the theoretical rigour of their degrees while promoting their applied nature; universities are under no such constraints to emphasise the theoretical rigour of their degrees, but many are seeking to establish a 'space' in the higher education market for their applied and experiential focus. What is a virtue for universities (experiential and applied learning) can be portrayed as deficit for colleges, given the generally lower status of applied and vocational education in postsecondary education systems in liberal market economies, and the lower status of colleges in the second, vocationally oriented tier of postsecondary education in those systems (Wheelahan and Moodie 2017). Challenges confronting colleges in establishing the legitimacy of their degrees is discussed later in this chapter and in Chapter 7.

This chapter analyses the nature of college curriculum and pedagogy and it discusses perceptions in colleges about these issues. It does so in two ways. The first section focuses on curriculum and it compares four college degrees with four degrees in cognate areas in universities that emphasise the experiential and applied nature of their degrees, and four degrees in cognate areas in traditional universities in Ontario. All data for this section were sourced from publicly available information about the degrees on institutions' websites. This section analyses the structure of their degrees, and the relative balance of theoretical and applied knowledge, content from outside the discipline included in the degree (PEQAB refers to this as the breadth requirements for the degree), and whether the degree

includes a work placement or co-op. Further information about the methods used to undertake this analysis is in Appendix 1. The analysis shows that college degrees contribute to differentiation in Ontario by offering degrees that have a more applied orientation than university degrees, but that there is also differentiation between those universities that emphasise the applied and experiential nature of their provision compared to degrees offered by traditional universities.

The second section of the chapter focuses on curriculum and pedagogy and it draws on interviews with policy leaders in Ontario, with institutional leaders and faculty members at five colleges that offer degrees, and institutional leaders at two colleges that do not. The interview data show that there is a general consensus among all interviewees about the distinctiveness of college degrees in both curriculum and pedagogy, about the importance of the applied focus, and the contribution that college degrees make to students and industry and to higher education in Ontario more generally. Distinctive pedagogical features include cohort-based teaching in smaller classes than at universities, theoretically informed practical learning, integrated co-op placements, and project-based teaching. This section concludes by discussing some curricular and pedagogic challenges colleges face, which includes the capacity they have to offer a broad range of electives, perceptions that some degrees may be overly narrow and the need to define and justify college degrees based on their own merits, rather than in contrast to university degrees.

Comparing college and university baccalaureate curricula

To assess how the curriculum of college baccalaureates differs from the curriculum of cognate baccalaureates offered by universities the study compared the curricula of four college baccalaureates with those of cognate degrees offered at universities within Ontario (12 degrees in total). To conduct this analysis, we identified:

   i.   the curricula of degree programs of Conestoga, Humber, Seneca and St Lawrence colleges from the three fields of study – applied arts, business, and technology;
   ii. the curricula of four degree programs offered at Ontario universities that emphasise the applied and experiential nature of their programs in degrees that are cognate to the college degree programs (Ryerson, and Waterloo);[18] and,
   iii. the curricula of four degree programs offered at traditional universities in Ontario that are cognate to the college degree programs (University of Toronto, Queen's University and York University).

Table 6 lists the twelve degree programs selected for review including the nomenclature of the degrees. The study compared these cognate degrees' program maps, objectives and content. Specifically, the study analysed the content of the degree curriculum by the weight of theoretical and applied knowledge in the curriculum, the structure of the degree, breadth requirements, work integrated learning experiences, industry connections and faculty credentials. The analysis was undertaken by examining the program requirements for each degree. This included analysis of: the types of courses students were required to undertake and if the emphasis was on theoretical or applied knowledge; whether students were required to, or had opportunities to undertake learning outside their discipline (breadth requirements); and, whether students were required to undertake a co-op or work placement.

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[18] We identified universities that emphasised the applied nature of their provision through the Strategic Mandate Agreements they submitted to the Ontario Ministry of Advanced Education and Skills Development (2014). See: https://www.ontario.ca/page/college-and-university-strategic-mandate-agreements viewed 14 June 2017.

Such an analysis can provide only an overview, because a detailed analysis of courses within the degrees would be needed to identify more clearly the extent to which students were required to engage with theoretical or applied knowledge. It would explore whether the theoretical knowledge students were required to engage with was presented as strongly 'classified' knowledge so that boundaries between different academic disciplines were clearly visible, whether the emphasis was on inter-disciplinary knowledge or whether the theoretical knowledge was presented as applied theoretical knowledge. The latter is different to applied learning because applied learning requires students to undertake a specific project or engage in a problem-based approach that requires them to focus on a concrete specific rather than focus on conceptual relations within the academic discipline or applied academic discipline. However, keeping these limitations in mind, this analysis still provides a broad picture into the level of differentiation in baccalaureate education available to students across the province. The analysis is valid to the extent that the program rules and course descriptions on institutional websites indicate to students the broad type of knowledge they are required to engage with, and the program requirements for work placements and co-ops. It provides insight into the sequencing requirements of courses, and the broad assessment requirements. Arguably, the assessment requirements show where the emphasis lies within degrees, because they assess what is most valued.

Table 6: Baccalaureate programs selected for comparative curriculum analysis

College Baccalaureate	Cognate Degree at a university that emphasizes experiential learning	Cognate Degree at a traditional university
Conestoga: Bachelor of Applied Technology: Architecture Project and Facility Management	University of Waterloo: Honours Bachelor of Architectural Studies	University of Toronto: Honours Bachelor of Arts: Architectural Studies
Humber: Bachelor of Music	University of Waterloo: Bachelor of Arts: Music Major	University of Toronto: Bachelor of Music
Seneca: Bachelor of Commerce: International Accounting and Finance	Ryerson University: Bachelor of Commerce: Accounting and Finance	York University: Bachelor of Commerce, Accounting
St. Lawrence: Bachelor of Applied Arts: Behavioural Psychology	Ryerson University: Bachelor of Arts, Psychology	Queen's University: Bachelor of Arts, Psychology

Figure 4 shows the overall structure of the different degrees in the three types of institutions: colleges, universities that emphasise their experiential focus, and traditional universities in Ontario. It shows the relative weightings of applied and theoretical knowledge, breadth requirements as expressed by the amount of learning students undertake outside their discipline, and co-op or work-placements. It shows three distinct types of institution. While there are differences between the disciplines within each type of institution, they are mostly more similar to each other than they are to the cognate program offered in a different type of institution.

Colleges   Experiential universities   Traditional universities
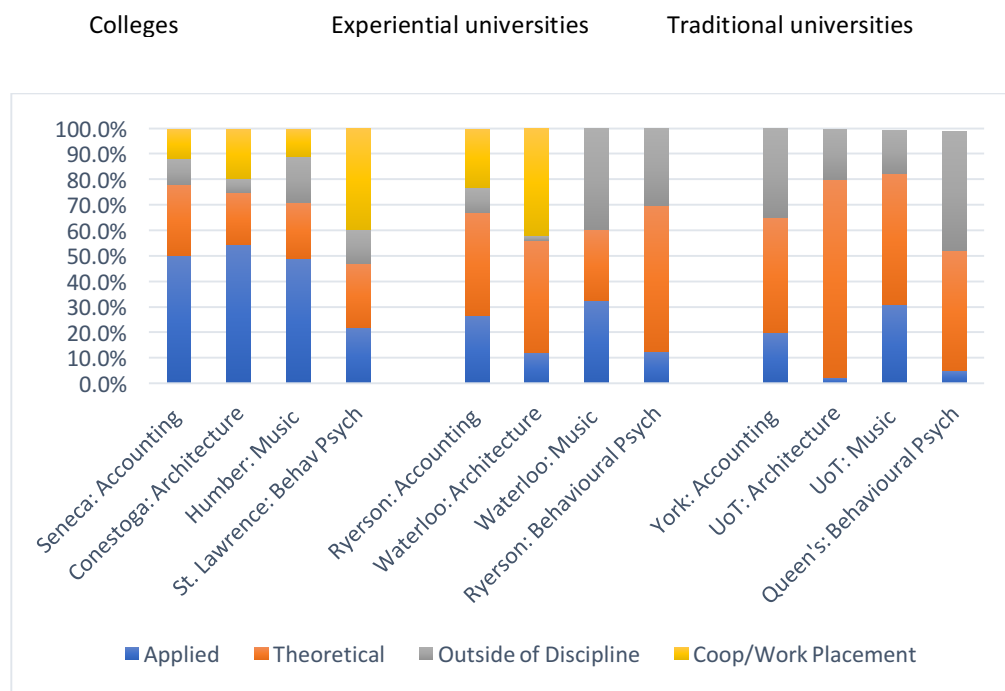
Figure 4: Structure of degree programs at colleges, experiential and traditional universities in Ontario

The remaining discussion in this section explores the different dimensions of the curriculum in each type of institution.

Weighting of theoretical and applied knowledge: An in-depth analysis of course descriptions across four selected degrees provides insight into the orientation of baccalaureates across the three types of institutions identifying direct links to the type of knowledge within programs. The analysis assessed whether a course was based on theory or practice or a blending of the two. Sentences within the descriptions were analysed for use of terminology related to theoretical knowledge or applied knowledge. Appendix 1: Methods provides an overview across the five disciplines of program evidenced through the program plan and course descriptions.

In the Bachelor of Commerce degree, for example, the weighted orientation to the applied in Seneca's degree (50%) is aligned with the way in which the degree is positioned and marketed on their website. Students are provided with a strong theoretical foundation on which to build their knowledge with 28% of their program focused on theory based content. Ryerson University, the experiential comparator, provides students with a coop[19] option for their BComm, which accounts for a 33% weighting on work experience within their program. Ryerson also provides a substantial amount of learning based in theory at 40%, with 27% of classes with an applied orientation and only 10% of courses outside of their discipline. York University, a traditional university, does not provide the coop or work placement option for students and has a much lower percentage of applied learning at 20%. Across all four degrees the applied content of courses within the program is greater in the college baccalaureates, with a lesser, yet substantial weighting on theoretical learning.

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[19] Co-operative education programs in the province of Ontario are designated programs providing extensive paid work placement and are approved for tax-credit purposes for employers.
http://www.fin.gov.on.ca/en/credit/cetc/

Degree structure: The structures of the degrees vary depending on the type of institution. The college baccalaureates are taught in cohorts and are very structured with few electives. The percent of courses outside of discipline ranged from 5.5% to 18% within the college baccalaureates. The cohort delivery prescribes which courses must be taken and when. While it is clear that cohort model provides many positive experiences for students (which students and teachers emphasised in interviews), particularly in creating a learning community, it can present a difficulty for students who have to undertake courses in a different order or at a different time for personal reasons. This is in part because the economies of scale mean that colleges cannot often offer courses outside the prescribed sequence of courses. The course selections for courses outside of the discipline are limited in college degrees which could restrict students in the depth of experience in their undergraduate education. Again, this is in part a result of economies of scale within colleges which restricts the range of courses they can offer, and (according to our interviewees) in part a consequence of PEQAB accreditation requirements which preclude some of colleges' general education being eligible to be counted as part of the breadth requirements. In the experiential universities, programs were also very structured with options for courses outside of the discipline. This ranged from only 2% in the University of Waterloo's Architecture degree to 40% in Waterloo's degree of Arts with a music major. At the traditional universities, the percentage of courses outside of the discipline ranged from 17% in the University of Toronto's music degree to 47% in Queen's University's Bachelor of Arts in Psychology.

Work Integrated Learning Another key characteristic of the college baccalaureate is the opportunity for a work experience, which is also evident in programs within the experiential universities where there was a high proportion of coop or work placement (42% for Waterloo's architecture program), whereas the traditional university did not provide opportunities for work placement or coops in the programs we examined.

Opportunities for paid work placements were integrated throughout all programs in the college baccalaureate and two of the four experiential university programs: architecture at Waterloo, and accounting at Ryerson. There was no opportunity for a work placement in the traditional institutions. The integration of work opportunities throughout the program allows for analysis, reflection and application of skills and theory being taught in the classroom.

Assessment of learning: To assess what knowledge is valued within the degrees we looked at how students are evaluated. This was done through a comparison of lower and upper level courses within one of the degrees, the bachelor of music degree (six courses, three lower level and three upper level). Appendix 1: Methods compares the curriculum across lower and upper level courses within music undergraduates within the three types of institutions. The music courses at both the college and the experiential university are very prescriptive providing detailed accounts of what students will learn and when in the course this learning will take place, along with how they will be evaluated. The course descriptions at the college level listed many learning outcomes, 24 in the lower level course, all focused on applied skills learning, and 11 in the upper level course with a greater focus on application and analysis. At the upper level the college course outcomes evolved to reflect an ability to translate skills in alternative contexts. There was no apparent significant difference in evaluation methods within each of the six courses reviewed. All courses presented a perceived balance between evaluation of theoretical knowledge and performance or analysis. Reviewing actual course assignments and tests would provide greater insight into different approaches to evaluation but this is beyond the scope of this study.

Faculty credentials: Faculty credentials were also listed on program pages on the website for most of the degrees. Faculty credentials may reflect the level of engagement that faculty members have had with their disciplinary field, and doctorates may signify that faculty have had more extensive training in research in their field, and in engaging with the discipline's framework for creating new knowledge (through research) and the criteria that are used to judge knowledge claims. This has been a key factor in the approval process for college baccalaureates and in the case of some of the specialized degrees it has been challenging to find faculty who have both doctorates and relevant professional experience in certain fields of study. The college music degree illustrates this challenge. A limited number of faculty hold doctorates, with only three out of 43 of the faculty on the website holding terminal credentials. Faculty in the music program at experiential and traditional universities, on the other hand, were more likely to have a PhD or doctorate in their area of specialization.

Industry connections: As all the colleges are mandated to have program advisory councils for every program, it was expected that this would be the case across the four degrees and this was confirmed. In the case of two of the four colleges and two of the four experiential universities, advisory council members were listed by name and affiliation on the website. One of the degrees at a traditional university listed relationships with key members of the industry but did not state their advisory capacity. In all four college baccalaureates, the advisory members play a key role in the development and review of curriculum.

Discussion of comparison of curricula in selected college and university degrees

The analysis of the baccalaureate curriculum across three different types of institutions in Ontario provide insight into the differentiated landscape of undergraduate degree offerings in the province. This analysis shows the variation in weight of applied and theoretical knowledge within college baccalaureates and their cognate programs in universities in the province. The close link with industry is evident through advisory boards and opportunities for work integrated learning throughout college baccalaureate programs and some experiential university degrees. Expert assessors on PEQAB's assessment panels have judged the applied orientation of the college baccalaureate to provide a balance between the theoretical foundations of knowledge and skill development and employment outcomes. However, there is scope for continuing debate and discussion about the extent to which colleges in Ontario and in similar institutions in other jurisdictions offer students access to the theoretical knowledge in their field of practice, and as a basis for higher level studies within their field (Wheelahan 2013, 2016). It is clear however, through the PEQAB accreditation process and through interviews for this project that this topic is the focus of a great deal of attention.

Understanding the orientation of degrees is essential for prospective students as they compare and contrast the baccalaureate options available to them. Our study invites further research about the ability of the different degrees to prepare students for the labour market or further studies at the graduate level. Our findings also demonstrate wide variation in cognate degrees across the system, the audiences that they serve and the different approaches to curriculum. The feedback from interviewees in colleges suggest that the existing accreditation requirements may not sufficiently reflect the different purpose and orientation of college degrees, and that this needs to be the focus of continued discussion between the Ministry, PEQAB and colleges. We return to this issue in the final chapter that discusses policy implications arising from our study.

Curriculum and pedagogy – perceptions of policy leaders, institutional leaders and faculty

This section explores the perceptions of policy leaders, institutional leaders and faculty members about colleges' curriculum and pedagogy. There was a positive consensus about the applied nature of curriculum in colleges' degrees with most having a shared understanding about the value of work-focused applied curricula. This positive view was shared universally by students whom we interviewed for the project, and their perceptions are discussed in Chapter 6**.** However, while most of our interviewees were positive about the distinctive curriculum and pedagogy of college degrees, some interviewees also identified challenges, which may include an overly narrow focus and/or the capacity to offer students a broad range of electives. Others felt that colleges needed to stop defining their degrees in relation to university degrees.

Distinctive curriculum and pedagogy

There was generally a shared perception that colleges' curriculum was distinguished from universities by their applied focus and orientation to specific fields of practice. Most members of faculty and leaders of colleges which offer baccalaureates said that colleges offer baccalaureates with a distinctive curriculum in being more applied than that of universities, more practical and more directly related to specific occupations rather than employment in general or in a broad field. Many of our interviewees argued that the key strength of college curriculum was the integration of theory and practice. For example, one institutional leader expressed a common view among our interviewees in explaining:

> A college degree program is not focused only on practice, but on helping students to understand the theoretical foundations of what they do as practitioners. This includes being able to identify and seek out relevant theory and having the ability to find new ways of doing things in their field of practice.

A further perceived strength was the notion that college degrees produce 'work ready' graduates. A leader of college which offers baccalaureates said that colleges teach students knowledge and how to use it, so employers do not have to spend too much time training and supervising college degree graduates. Several faculty members who teach in degrees made a similar point.

Some college faculty said that different fields of knowledge are better integrated in college programs, rather than kept in disciplinary silos. The inter-professional interaction occurs both horizontally with students in related degree programs, and vertically, with students in related diploma programs. This was reflected in the way the curriculum was organised as a whole and not just in the work placement or co-op. For example, one institutional leader explained that another strength of college degrees and the way they are structured within colleges is:

> …the capacity to connect students inter-professionally during their studies. For example, students in related programs such as Social Services Worker, Child and Youth Worker, and Community Development can interact and learn from each other. Both the School of Community and Social Services and the School of Business have common platforms in which students in different programs take courses together. The Schools find ways for students from different programs to work together on inter-professional projects.

Most members of faculty and leaders of colleges which offer baccalaureates said that colleges offer baccalaureates by a distinctive pedagogy which integrates theory and practical studies in the curriculum and applies theory to practice close in time and place. A member of faculty who teaches in a diploma in a college that offers baccalaureates says college graduates do not 'just know it, but know how to do it'.

Many interviewees report that colleges include a lot of project work in baccalaureates (but not necessarily in their diplomas) which integrate theory and practice and integrate studies in different courses. For example, one college's degree is built on projects: students complete four projects in two parts over two terms. Colleges are said to develop students' ability to solve problems in practice and to develop students' soft skills, ability to work in teams, to be more mobile and move to different roles.

One of the most distinctive characteristics of pedagogy in college degrees is that classes are smaller and that students tend to be taught in cohorts, which helps create a shared learning community. Faculty members have more direct relationships with students and get to know them very well. For example, one institutional leader explained:

> Faculty do the marking, not teaching assistants, and so they develop a good understanding of students, their development and the kind of support they need. Teachers have to do the college's certificate in teaching and this helps ensure good teaching skills.

The reference to the college's certificate in teaching refers to the teaching certificate that all new faculty members are required to do when they commence as full-time faculty. This is a feature of all Ontario's colleges, and reflects colleges' focus on pedagogy.

Colleges tend to teach both diplomas and baccalaureates in cohorts: each cohort remains mostly the same for each course and also for all the program's years. It is argued that college classes are therefore more cohesive than university programs which do not teach in cohorts. Most interviewees said that because college classes are smaller, this allows faculty to teach more flexibly and more responsively to students. A member of faculty of a college offering baccalaureates said that teaching diplomas and degrees facilitates students moving along a continuum from guided learning by direct delivery and engagement to more independent self-directed learning.

The focus on the workplace and applied learning meant that colleges spend a lot of time thinking about the design of teaching spaces. One example that was offered was a classroom with whiteboard and bench at one end of the space where the faculty member presents theory and demonstrates its implementation. This is in contrast to a lecture theatre or a classroom that only facilitated group-work, at best. In the example provided to us, in some such spaces there is a camera which projects close ups of the demonstration onto a screen behind the faculty member. The rest of the teaching space has student work benches where students practice the method that is presented to them.

College faculty and leaders also referred to the importance of co-operative education placements and their integration with the program offered on campus. An interviewee reported that co-ops greatly enrich students' subsequent studies on campus since students see the application of their knowledge in practice during their co-op placements, have many questions arising from their co-ops, and have renewed interest in learning on campus. A leader of college which offers baccalaureates added that in their final year students work with local employers in a capstone project which integrates their different fields of knowledge and integrates theory and practice.

Of course, all universities offer laboratory classes and universities are increasingly following the University of Waterloo's co-operative education. But it was put to us that in universities theory and practice are often offered separately, leaving students to integrate them. In contrast, colleges integrate theory and practice much more closely.

A particular strength of college degrees is their capacity to provide pathways within their college, and to build on extensive provision within the same field. While universities offer a broader range of programs, colleges tend to offer programs over many levels. For example, one college's engineering school offers, amongst many other credentials, certificates, technician diplomas, technologist advanced diplomas and professionally accredited bachelors in electronics and in mechanical systems engineering. This makes it easier to 'ladder' programs, or integrate them to ease progression or at least support pathways. It also makes it easier to build coherence in curriculum, pedagogy and assessment from diploma to degree programs, and this has been identified in the literature as a key way in which students' transition to degree level studies can be supported (Milne, Glaisher, and Keating 2006; Milne, Keating, and Glaisher 2007; Wheelahan et al. 2012). However, and equally important, it is necessary to ensure that students understand that their orientation to learning and the nature of the learning itself is not 'more of the same', but requires a higher level of independent learning, and a higher level of engagement with abstract and conceptual knowledge. This too has been identified in the literature (Bathmaker and Thomas 2009, Wheelahan et al. 2009a, Young 2006), but was also a point made by several faculty who teach in both diploma and degree programs.

Challenges of colleges' distinctive curriculum and pedagogy

While interviewees were overwhelmingly positive about colleges' distinctive curriculum and pedagogy, they also identified challenges. This section discusses only challenges related to curriculum and pedagogy as broader challenges are discussed in Chapter seven

A leader of a college that does not offer baccalaureates said that they do not object to colleges offering baccalaureates in principle nor because baccalaureates do not fit colleges' mission, but observes that in practice colleges may have difficulty offering students the range and choice of studies associated with baccalaureates. This originates largely from an initial design problem with college baccalaureates. The interviewee said that college baccalaureates have the merit of concentration and specialisation but the disadvantage of being narrow. They limit students' choice of studies and afford students little flexibility to change their concentration as their interests develop and change. This narrowness and precision of choice of programs in students' early years of baccalaureate study is problematic. These design problems can be overcome but with considerable difficulty and at considerable expense.

While this was just one, distinctive, view, several interviewees echoed an aspect of this point in observing that colleges offered too narrow a range of electives and did not try to offer general or even broadening education in their baccalaureates. Two interviewees mused about the possibility of college baccalaureate students being able to take electives from a neighbouring university, but they did not think this was a realistic prospect, at least in the short term.

A member of college faculty who teaches in baccalaureates said that it would have been possible to differentiate college degrees as preparation for niche professions markedly different from university degrees which prepare graduates more generally for work. But it is now too late to argue for fundamental differences between college and university bachelors. The interviewee argued that

PEQAB's specification of honours degrees was a missed opportunity to differentiate between types of degrees. It has pushed college degrees to being applied versions of university degrees related to professional practice. This is college degrees' only remaining distinguishing characteristic making them second class cousins to university degrees.

A key challenge for curriculum and pedagogy is that colleges persistently define their approach by emphasising how it is different to universities' approaches. Notwithstanding the distinctiveness of college's baccalaureates, one leader of a college that offers baccalaureates said that a challenge is to 'break free from the university system', while recognising the need to ensure that bachelors maintain their incorporation of current research. Another college leader makes the point that:

> There is perhaps an apparent contradiction between making deliberate attempts to differentiate our curriculum from that of the universities, while at the same time seeking to use mainstream degree nomenclature, such as Bachelor of Commerce, or Bachelor of Social Sciences, both of which the college fought successfully to obtain.

All interviewees defined curriculum and pedagogy by emphasising how it was equal to, but different from, university curriculum and pedagogy. This inevitably creates difficulty of legitimation for college degrees, which is not the fault of colleges, but of the hierarchical structuring of higher education, which is discussed in chapters seven and eight. But by making differences with universities the main defining characteristic of college degrees, we run the risk of creating caricatures of provision in each sector, whereas the analysis of curriculum in colleges, experiential universities and traditional universities shows that we should think of provision as on a continuum, in which certain types of provision are associated with certain types of institutions, but not rigidly so. This would give colleges more freedom to develop their degree programming to meet the needs of students, industry and the community. It would also provide opportunities to learn from each other.

These points were made by several of our interviewees, who , however, acknowledged the unequal power relations between colleges and universities. For example, several of our interviewees argued that colleges and universities were having a mutually positive influence on each other, as each drew on the strengths of the other to strengthen their own curriculum. One faculty member explained:

> More university programs are offering co-operative education and applied studies. Both types of institutions are inspiring change in each other. For example, universities are offering more co-operative education programs and applied studies, which colleges are incorporating more research in their baccalaureates.

These points are developed more in Chapter seven which discusses challenges and opportunities colleges experience in developing their degree provision.

5. What the data say: students' perceptions and outcomes

This chapter analyses students' perceptions and outcomes using data from the 2015-2016 Ontario Student Satisfaction Survey; the 2015-2016 Ontario Graduate Outcomes Survey; the 2015-2016 Employer Survey, and college student enrolment and graduation data.[20] We also interviewed 35 degree students (which included four recent graduates) and their perceptions and understandings are explored in the next chapter. The focus in this chapter is understanding students' backgrounds, the reasons why they undertook their studies, their perceptions of their programs, their labour market outcomes, and employers' perceptions of degree graduates using the data sources above. A detailed description of the methods used in this chapter are in Appendix 1.

The first section reports on students' demographic characteristics. It finds that the percentage of students undertaking degrees in colleges who report that they are the first in their family to attend postsecondary education is somewhat lower than in diplomas, as is the percentage who indicate that they have Aboriginal ancestry. However, the gap between the percentage of students taking degrees who report that they have a disability and the college system percentage is narrower. The chapter argues that the categories of disadvantage need to be revisited to ensure that students who need support can get it, and that improved data is needed to inform policy. The next section of the chapter finds that students undertaking degrees in colleges achieve the highest labour market outcomes of any college students from their studies, that their graduation rates are high, and that they report similar levels of satisfaction with the knowledge and skills they are gaining; however, they also report the lowest levels of student satisfaction on key dimensions. It also finds that 10% of degree students indicate that one reason they have undertaken their studies is to prepare for further studies. This raises the question about the extent to which college degree graduates have access to masters degrees. This is discussed in later chapters. Finally, the chapter concludes that Ontario colleges have established the infrastructure, policies and culture to meet the needs of students in traditional college programs, but that they are still developing the necessary frameworks to support degree students. We return to this point in chapter 8.

Who students are and their reasons for studying

One of the foundational mandates of colleges in Ontario was to provide access to postsecondary education for students from disadvantaged backgrounds (Ontario Department of Education 1967), and generally speaking, colleges in Ontario have a higher percentage of students from disadvantaged backgrounds than do Ontario's universities (Finnie, Childs, and Wismer 2011). What is less known is whether students from disadvantaged backgrounds have similar access to different levels of credentials *within* colleges. Research from Australia (Wheelahan 2009a, Webb et al. 2017, Gale et al. 2013) and England (Thompson 2009) shows that the higher the level of credential within colleges, the less likely students are to come from low socio-economic backgrounds.[21] [22]

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[20] Access to the data was provided by Colleges Ontario. Dr Qin Liu, the post-doctoral researcher on the project and one of this report's authors, undertook the data extraction and analysis.

[21] The two articles cited here focus on comparing access by students from low socio-economic backgrounds and not on other categories of students from disadvantaged backgrounds.

[22] Data on students from disadvantaged backgrounds in Ontario are notoriously difficult to quantify in the absence of regular, published reports and there are differences depending on the data source. In this chapter, in reporting on students' demographic characteristics, we have used data from the Student Satisfaction Survey. It shows a higher percentage of students from first generation backgrounds than does enrolment data, and this is discussed

Table 7 shows the percentage of students responding to the 2015-2016 Student Satisfaction Survey who said that they were the first generation in their family to attend postsecondary education, or that they have a disability, or that they have Aboriginal ancestry. Unfortunately the survey covers only these categories of disadvantage, and specifically does not include family income and parents' occupations and education. The table shows that with the exception of students reporting that they had a disability, there is a lower percentage of students undertaking degrees reporting that they were the first in their family to undertake PSE or that they have Aboriginal ancestry than for all other credential types. Arguably, there are two problem with the category of first generation student in Ontario. The first is that it is based on students' self report. While students' self report of their membership of equity groups in the Student Satisfaction Survey is consistent with their self report in enrolment data, they are better read as indicators of relative rather absolute levels of participation of members of equity groups. which may have problems with accuracy. The second reason is that it excludes students whose parents have enrolled in a college as well as those whose parents have enrolled in a university We think that there are marked differences between these two types of participation and in outcomes between the two sectors and that this category should be revisited to more effectively identify students who have limited resources they can draw upon in navigating *university* education. But, nonetheless, this category shows differences *within* the college population.[23]

Table 7: 2015-2016 SSS data indicators of disadvantaged students

	Certificates	Diplomas	Advanced diplomas	Graduate certificates	Degrees	Total
First generation	32.1%	35.1%	29.9%	32.2%	24.6%	32.5%
Having learning disability	19.3%	17.2%	14.6%	8.1%	13.8%	15.9%
Aboriginal ancestry	6.0%	4.8%	3.4%	2.9%	1.9%	4.2%

Pearson Chi-square was used to test statistical significance. All: p < .001.

Table 8 shows students' high school grade point average for each credential in colleges. It is restricted to enrolment data for new, domestic fulltime students in the fall of 2015 (and not Student Satisfaction Survey data). It shows that students enrolling in degrees and graduate certificates had a higher GPA than students in other credentials. This is to be expected since PEQAB's (2015: 23) admission requirements for degrees in colleges are the same as those for public organizations applying for Ministerial consent under the Post-secondary Education Choice and Excellence Act, 2000.

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in Appendix 3**.** However, the enrolment data only includes domestic students in regular full-time programs and it is a snapshot from Fall 2015, whereas the Student Satisfaction Survey includes all students in a fulltime postsecondary program (with some restrictions) who were students in the particular year. The SSS also has data for students who report having a learning disability and students who report that they have Aboriginal ancestry, whereas we don't have those enrolment data. So, in the interests of consistent reporting, we have used the Student Satisfaction Survey data in reporting students' backgrounds, with the exception of data on students' high school GPAs which is based on enrolment data.

[23] It is particularly interesting to note that students undertaking graduate certificates have a higher percentage of students reporting that they are the first in their family to undertake PSE, while they have a lower percentage reporting that they have Aboriginal ancestry, and the lowest percentage reporting that they have a learning disability. Most of these students already have degrees. The nature of graduate certificates and students undertaking graduate certificates is however, a topic for a different research project.

Table 8: High school GPAs by credential

	Mean
Certificate	71.60
Diploma	72.38
Advanced diploma	72.89
Degree	77.12
Graduate certificate	77.13
Overall*	72.76

This is for incoming, new domestic full-time students in fall of 2015.
*Including "unknown" and "other".

Further research is needed to explore the background of college degree students and why it is so different to students undertaking other credentials. As discussed earlier in this chapter, this finding is consistent with research in similar systems in Australia and England. It would be helpful to have richer indicators of disadvantage in Ontario, but nonetheless, these data demonstrate that the hierarchical structuring of higher education is reflected *within* colleges and not just *between* colleges and universities. However, as is apparent in the next chapter that discusses our interviews with students, most students we interviewed do not come from backgrounds where undertaking a degree in a university was a certainty. It is clear that many of the students we interviewed would not be undertaking a degree if they were not doing so in a college. While the socio-economic data reported here show a hierarchical structuring, these data seem to show higher levels of access for students from disadvantaged backgrounds than in universities. Deller et al. (2011) show that students from the highest income quartile have a much higher participation rate in universities compared to the other three income quartiles, while participation rates in colleges show very little difference between income groups. However, it would be helpful to have access to data on participation rates by student characteristics and indicators of disadvantage reported *by credential* level within colleges and universities, and not just *between* colleges and universities.

Student experiences: Survey results[24]

It is unsurprising that most students undertaking degrees in colleges report that their main goal is to prepare for employment or a career (Table 9). This is consistent with other literature evaluating degrees in colleges in Ontario (Malatest and & Associates Ltd. 2012) and the literature exploring students in colleges undertaking diplomas or above and with the literature on student intentions and aspirations more broadly (Morris and Rutt 2003, Murray and Klinger 2014, Department of Education Science and Training 2005, Hillman 2010). Table 9 is also notable because it indicates that almost 10% of students undertaking degrees indicate that they are doing so to prepare for further college or university study, which indicates the importance of access to a master's degree for graduates of college baccalaureates.

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[24] It is important to note that the Ontario Graduate Outcomes Survey is undertaken six months after graduation, so the reported outcomes are a very preliminary outcome of graduates' achievements. Moreover, some of the data in this report have been calculated using methods that may differ slightly from that used by Ministry of Advanced Education and Skills Development to calculate the KPIs or the employment profile.

Table 9: Main goal in program enrolment

	Certificates	Diplomas	Advanced diplomas	Graduate certificates	Degrees
To prepare for employment/career	49.0%	75.1%	75.8%	84.1%	82.5%
To prepare for further college or university study	42.4%	16.3%	17.4%	6.4%	9.8%
To pursue an interest or for personal development	6.6%	6.4%	5.3%	7.4%	6.0%
Other	2.0%	2.2%	1.5%	2.1%	1.6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

The chi-square statistic is significant, p < .001. phi = .24.

Degree graduate students seem to have higher *outcomes* than students in other credentials, but lower levels of *satisfaction* with various aspects of their learning experience in colleges. Table 10 shows that graduates of degrees had the highest employment rate of all graduates, but employment rates for graduates of all credentials were high. The employer satisfaction rate is high for all credentials. Degree graduates also had higher graduation rates than those from diplomas and advanced diplomas, but lower than those from graduate certificates. This is understandable given that graduate certificates are one year programs, while degrees are four year programs. It is interesting that degree graduates have a somewhat higher graduation rate than diplomas which are two-year programs and a markedly higher graduation rate than advanced diplomas which are three-year programs. Employer satisfaction rates are high for all credentials. However, degree graduates have the lowest level of student satisfaction. Digging into the weeds (see Appendix 3) shows that degree students have similar levels of satisfaction with diploma and advanced diploma students in being provided with the skills and ability they have chosen for their specific career, and that the program is giving them knowledge and skills that will be useful in their future career. However, they have somewhat lower levels of satisfaction compared to diploma students (but not advanced diploma and graduate certificate students) with the overall quality of their learning program. And, they tend to have lower levels of satisfaction with student services and the overall quality of services in the college, and with their overall college experience. The consistently lower level of satisfaction as perceived by degree students with various student services and college facilities when compared with students studying for other college credentials suggests that Ontario colleges have met the needs of students in the traditional type of college programs – certificate and diploma – better than degree program students, and that they have not yet established the support sought by degree students.

Table 10: KPI indicators by level of credential

	Certificates	Diplomas	Advanced diplomas	Graduate certificates	Degrees	Sig. level
Graduate employment rate	83.2%	82.8%	83.3%	80.8%	85.2%	
Graduate satisfaction rate	83.2%	79.9%	79.2%	75.8%	75.3%	p < .001
Employer satisfaction rate	90.2%	90.6%	93.8%	96.4%	92.3%	p < .01
Student satisfaction rate	79.5%	77.9%	75.8%	74.1%	71.1%	
Graduation rate	70.6%	64.8%	60.9%	87.3%	67.5%	

Table 11 shows the same data by field of study, and it shows marked differences between fields. Health has been removed as a field of study because the percentage of degree students was very low; students in degrees in health were 4.4% of all degree students in 2015, whereas applied arts students were 46.2%, business students were 34.7% and technical students were 14.7% of degree students respectively. Table 11 also shows that in applied arts degrees graduates' employment rate is comparable to graduates of degrees in business, but higher than the employment rate for degree graduates in technology. However, the graduate satisfaction rate is highest among degree graduates in technology compared to business degree graduates and much higher than degree graduates in applied arts. Table 11 also seems to show that graduates have higher satisfaction rates than students in many credentials, particularly in technology, although this jumps about a bit for applied arts)! Employers seem to be pretty happy overall.

Table 11: KPI indicator by Field of Study

Applied Arts	Certificates	Diplomas	Advanced diplomas	Graduate certificates	Degrees	Sig.	Phi
Graduate employment rate	77.9%	85.5%	84.6%	82.3%	86.2%		
Graduate satisfaction rate	84.9%	82.5%	78.6%	76.4%	72.5%	p < .001	
Employer satisfaction rate	91.5%	90.5%	93.2%	96.9%	92.3%	n.s.	
Student satisfaction rate	79.2%	79.3%	79.3%	77.3%	72.0%		
Business	**Certificates**	**Diplomas**	**Advanced diplomas**	**Graduate certificates**	**Degrees**	**Sig.**	**Phi**
Graduate employment rate	78.7%	79.1%	82.0%	78.1%	85.8%		
Graduate satisfaction rate	80.8%	77.0%	78.5%	72.7%	77.4%	p < .001	
Employer satisfaction rate	91.9%	91.5%	95.9%	95.0%	92.6%	n.s.	
Student satisfaction rate	80.3%	77.0%	73.3%	72.8%	71.6%		
Technology	**Certificates**	**Diplomas**	**Advanced diplomas**	**Graduate certificates**	**Degrees**	**Sig.**	**Phi**
Graduate employment rate	85.4%	80.1%	81.8%	79.1%	80.9%		
Graduate satisfaction rate	77.9%	76.2%	78.5%	75.6%	83.2%	n.s.	
Employer satisfaction rate	84.5%	90.4%	93.6%	100%*	100%*	p < .05	.137
Student satisfaction rate	76.9%	76.2%	74.2%	70.3%	66.1%		

*small sample size (<30)

Overall, Table 12 shows that degree graduates reported that they would recommend their program to others at a similar rate to graduates of other credentials – which was consistently high. The percentage who said that they would recommend their *college* and not just their program was even higher.

Table 12:Graduatues inclination to recommend the program and the college to others

	Certificates	Diplomas	Advanced diplomas	Graduate certificates	Degrees
Would recommend the program	90.4%	87.8%	88.6%	84.9%	88.8%
Would recommend the college	96.7%	94.8%	94.6%	93.5%	93.4%

We compared the outcomes for graduates and students of ITALs and graduates and students of CAATs, and found that graduates and students of CAATs generally had better outcomes and were generally happier, but this is most likely a function of institutional size rather than anything else. Conway and Zhao (2012) and Conway et al. (2012) show that outcomes in the National Student Satisfaction Survey administered in universities differ by institutional size and that bigger institutions generally have poorer outcomes. The ITALs are big institutions mostly based in the Greater Toronto Area, whereas the CAATs are more spread out and are usually smaller institutions.

Table 13 shows the average annual salary that graduates reported by credential. It shows that the higher the credential, the higher the salary. The salaries of graduates from graduate certificates are slightly higher than for degrees, and the position of graduate certificates is somewhat ambiguous being positioned just below honours degrees on the Ontario Qualifications Framework (Ministry of Training Colleges and Universities 2009), however most graduates of graduate certificates had a prior degree. The higher salaries of students with degrees compared to diplomas is also consistent with the literature (Social Research and Demonstration Corporation 2015). Degrees have a small premium over advanced diplomas, which may suggest they substitute at least to some extent for advanced diplomas in the labour market.

Table 13: Average annual salaries

	Average annual salary
Certificates	28,421.75
Diplomas	30,006.51
Advanced diplomas	34,607.93
Degrees	35,177.37
Graduate certificates	36,427.27

ANOVA was used to test the group difference. The F-value was significant, $p < .001$

Overall these data show that the outcomes of degrees in colleges are generally good, as they are for most credentials. Their labour market outcomes are high, and their levels of satisfaction with the knowledge and skills they learnt in their degrees were also high. However, their levels of satisfaction with various student services are not high, and are consistently below other categories of students. Colleges need support to build the institutional infrastructures and cultures to support degree students, and we return to this discussion in Chapter 8.

6. What the interviews say: students' voices

This chapter discusses the perceptions of 35 students we interviewed at five colleges in Ontario. We explored their understandings about their degree studies, how their studies help to shape their identities and their perceptions about the benefits and challenges of studying a degree in a college. We used the concepts of 'embedded and contingent' choosers to analyse their responses, with the former as 'traditional' higher education students, and the latter non-traditional students (Ball, Reay, and David 2002). The first section outlines who the students were, and their reasons for undertaking a degree in a college. It commences by explaining our conceptual framework for examining who the students are and their reasons for studying a degree at a college. We then use this framework to explore students' experiences of studying in college, and conclude by exploring their perceptions of the status of their degrees and their own identities as higher education students. The chapter finds that while students are overwhelmingly happy with their degree studies, that a narrative of contingent choice runs through the student interviews and that most students have at least some attributes of contingent choosers, but that this does not characterise all students. However, the positioning of college degrees and colleges more broadly as an opportunity for disadvantaged students in a hierarchically structured higher education system underpinned by relations of power helps reinforce the narrative that college degrees are for students who wouldn't do well in universities. The relative newness of college degrees and the fact that most degrees are offered in universities contributes to these perceptions. Ultimately, college graduates will build the reputation of their degrees, but there are policy implications from this analysis which are addressed in the final chapter.

Who students are and why they choose to study at college

A key rationale for college baccalaureates is that they provide access to students who may not have otherwise had such access (Skolnik 2005, 2013b). We have drawn upon Ball, Reay and David's (2002) analytical framework of contingent and embedded choosers to explore the issue of access and to analyse the student interviews. Embedded choosers are those students for whom going to university to obtain a degree is a natural progression in their lives. In contrast, contingent choosers are those students for whom obtaining a degree is not a certainty. Ball et al. emphasise that concepts of embedded and contingent choosers are ideal types that work as a simple binary and they warn about the dangers of simple dichotomies that emphasise differences and not similarities. They explain that the categories "should not be mistaken for descriptive categories" (Ball, Reay, and David 2002: 336). And, they explain that many students will not fit neatly into one category of the other. Rather, Ball et al. (2002: 336) explain that their framework can be "thought of as two different discourses of choice. The social conditions of choice for each type are different". The framework of embedded and contingent choosers helps us to understand the social basis of choice, even if students may not fit neatly into one category or the other.

There are different factors that underpin the nature of choice between embedded and contingent choosers, and there are interrelationships between the factors within each category. Embedded choosers are those students who have understood from an early age that they will go to university. The issue is not whether they will go to university, rather it is which university and the type of program they will undertake. "Choice is part of a cultural script, [it is] a 'normal biography'" (Ball, Reay, and David 2002: 337). The fact that they can choose programs and universities is embedded in their imagined futures. They have extensive social networks (social capital) they can mobilise in making sense of their choices and they have diverse and extensive sources of information. Their parents act as 'strong

framers' and they are active participants in students' choices. Finance is not an issue and nor is the notion studying away from home.

In contrast, contingent choosers are those students for whom obtaining a degree is not a certainty and the notion of choice is distant and unreal. They are often the first in family students with no family traditions of participation in higher education they can draw upon. Ball et al. (2002: 337) explain that going to university is not a given. They explain that "higher education and 'getting a degree' are general categories; neither family nor student have much sense of the different kinds and statuses of higher education on offer or what higher education study will be like" (Ball, Reay, and David 2002: 337). Their decisions about applying to higher education are more recent, and "Higher education becomes a break or hiatus in family and personal narratives" (Ball, Reay, and David 2002: 337). They do not have extensive sources of information or social networks, and finances are a key concern, as is the prospect of "moving away". Because their parents may not have had access to higher education, they are 'weak framers' of students' choices, even though they (often mothers) provide practical support.

We are not claiming that our 35 student interviewees fit neatly into one category or another, but overall, they tend to reflect contingent choosers more than embedded choosers. And, we are not claiming that our student interviewees are representative of all students undertaking degrees in colleges. However, the interviews supplement the findings in the previous chapter by providing insights into their different perspectives. Their perceptions and experiences may illustrate the experiences of other students and can help us to understand the types of perspectives that exist among degree students in colleges without claiming to represent all students or that different proportions of students hold particular views.

Table 14 presents student interviewees' prior level of education before enrolling in their degree and their age at the time of our interviews. It also shows the year in which students were studying, and their field of study. The biggest group of students are high school entrants, while the majority have had different types of prior PSE experience. Most students are aged under 25, and about 83% are aged under 30 years. Most students had had at least one year's experience studying in their degree at the time of our interview.

Table 14: Students' characteristics: prior education; age; level of study; and, field of study

Prior education	n	%	Age	n	%
High school	15	42.9%	Under 25 years	21	60.0%
Some prior college	1	2.9%	25-29 years	8	22.9%
College diploma	9	25.7%	30-34 years	3	8.6%
Some university	7	20.0%	35-39 years	1	2.9%
University degree	3	8.6%	40 years & older	2	5.7%
Total	35	100.0%	Total	35	100.0%
Year of study	n	%	Area of study	n	%
First year	2	5.7%	Applied Arts	17	48.6%
Second year	10	28.6%	Business	3	8.6%
Third year	9	25.7%	Health	10	28.6%
Fourth year	10	28.6%	Technology	5	14.3%
Recent graduates	4	11.4%			
Total	35	100.0%	Total	35	100.0%

Table 15 shows the main rationales students provided for studying a degree at a college. We explore these reasons in the discussion that follows.

Table 15: Identified rationales for pursuing baccalaureates at colleges: Students' perspectives

Identified rationales	n
Curricular or instructional features of college baccalaureate programs	14
Geographic proximity	13
Grades not high enough for university admission	11
Niche programs	8
Upgrading PSE for diploma students	7
Financial concerns (lower tuition at colleges)	6
More occupation-specific	4
Meeting labour market needs	3
Providing another PSE opportunity	1
Career change	1
Providing an opportunity to figure out career goals	1

Many of the students we interviewed decided to study a degree at a college relatively soon before commencing their degree, or after they had commenced other higher education studies (such as a diploma in a college or a degree in a universities) and they often did not have extensive family resources to help them make these decisions. For example, one student wanted to do a degree in a university, but she finally decided to go to college because the application process was less stressful.

> '[The] university application process is more complicated. I also had some financial issues. My parents were kind of involved in the decision-making process. They were not able to get too much involved in deciding what programmes to go to because they knew just as much as I did – what they knew about the school was the information I was telling them. So they didn't really have a say what school I went to.'

One of the most often mentioned reasons that students provided for undertaking their degree at a college was that they wanted to access the applied curriculum of the degree in the area in which they were interested, and several indicated the specific niche program they wanted to do. For some students this was the key, over-riding reason for doing their program. Many students wanted to access the applied hands-on and practical learning that was available in college degrees, and they were keen on combining theory and practice. They were also very pleased about being able to access the internship and co-op placement, not just because it was applied learning, but because it gave them experience in their intended field of practice, a sense of what working in the industry would be like and social networks. The applied curriculum was something that was identified by all categories of students, including those who had had prior experience at university. For example, one student reported that in her university degree that "the program for me was too broad and too big. I wasn't able to focus my studies in any direction … there is no specialty … and I couldn't grasp onto anything." Conversely, a student reflecting on her experience at university compared to her current college study said, "the approach of college for disseminating knowledge is more interactive. You're allowed to apply what you learned."

Professional accreditation mattered for students in those fields where it was relevant, and this outweighed other considerations, such as the status of the degree. For example, one student studying an accredited engineering program explained that:

"I don't like the idea that my bachelor degree is from a college but I know I will get the iron ring. It is quite different from getting a diploma. An iron ring will almost guarantee me that I can be in a management position. If they don't provide the iron ring, I would not have come here."[25]

Most degree students would not be aware of the PEQAB standards; however, in their mind, accreditation is a critical indicator that demonstrates the quality of their college degree program.

The geographic proximity of the college was also raised as an important consideration by many students. This was a consideration for younger as well as older students, and students who had to work while they were studying. For example, one older student explained that: "I don't want to travel to Toronto. I have a house and a family and I don't want to move." He explained that he explored a number of universities, but he couldn't get into his local university because his marks weren't high enough. Going to the college to study was his only option, one which he didn't regret, explaining "I am glad I am here. It's a really good program." Another student explained:

"I was thinking about going back to school, and a couple of people in the industry that I respect brought up the name of [Name of college] international degree programme … This is the closest international development degree programme to … where I live. So this was a huge factor. I wanted a place to go while I still work on my job.'

The students we interviewed had achieved mixed grades in their prior studies. Ten students with prior university experience had had grades that had enabled them to get into university, and several other students indicated that they probably had high enough grades to get into university, but chose instead to study at college. Their reasons for doing so were mostly based on three factors: location, cost and coops. However, about 11 students indicated that their grades were not high enough for university admission, and for these students, studying at college was initially their only option. Others said their grades weren't great, and while they may have been able to get into something at a university, this was a better option for them.

For those college students who had already finished a diploma, the familiarity with the college atmosphere where they had undertaken their diploma was an important consideration. This was especially the case when the baccalaureate program was in the same field of study as the diploma. For example, one student liked the idea that the degree program was similar to his diploma program and it offered a work placement based on home address. Another student explained that: "I chose to go to college because I like smaller classes and … the proximity, it's close to my home". Familiarity with the college and the field encouraged them to pursue a baccalaureate at their college and it gave them the chance to get practical experience in the occupational field they wanted to enter. One student stated, "It was a good experience. We were using the long-term care facilities. We were able to observe and practice what we had learned." Another student added, "I'm liking that I get a lot of hands on experience with instrumentation and like learning lab skills. I feel like university would be focused more on the theory behind science rather than actually learning how to work and all that. And it increases my job prospects too."

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[25] This website explains the lovely story behind the iron ring which is given to engineers when they complete an accredited program of training: http://www.ironring.ca/background.php viewed 18 June 2017.

The students who reported that they had had prior university experiences were undertaking their college degree to achieve their vocational aspirations, but also and strongly so, because they were alienated by their university studies. They said that while they were at university that the curriculum was overly theoretical, classes were big and impersonal, and professors were remote, and it was difficult to establish a personal relationship with them to ask them questions and get support. There was some evidence that students who had not directly experienced university studies were affected by these perceptions. For example, one woman who decided to become a mature aged student drew from the experience of her daughter who had been to university. Her daughter's experience was that professors were arrogant and unfriendly, and she decided to go to college because "it offers personalised instruction". Another student explained that she had heard that "Universities would be difficult. I heard that hundreds of people sit together and faculty are more concerned about their research than teaching."

Benefits and challenges of studying a degree at college: students' perceptions

Many of the benefits of studying a degree in college that students reported are aligned to their reasons for undertaking a college degree in the first place: they want the applied curriculum and hands-on practice, co-ops and work-placements. They reported that they loved the small class sizes and it seemed that they formed tight groups within their program, a likely outcome from teaching in cohorts. They were students in their program first, students in the college second. For example, one student stated, "Because the program was so small, we became a family and we had a Facebook together. It was great to have support from peers. It is really important to have that social support." Another student commented on her college experience by saying, "The environment is ideal. There is a lot of peer support. There is a lot of dialogue and discussion. The interaction is ideal. People help each other."

The most commonly reported benefit was access to professors and small class sizes. Students loved that they had easy access to their professors, that they were accessible and approachable and that they got to know each other very well. Students also valued their professors' industry experience. This enriched students' experience, because professors can relate to their experience and give students a feel for the challenges and issues they might face in an actual workplace. One student described her professors by saying, "they are coming from industry and they are very passionate about what they do."

There were mixed views about facilities and ancillary services at the colleges. Some students found these services to be very helpful, while others less so. One student explained that the Learning Centre was really helpful in supporting her in math, while another student commented that the counselling services helped her maintain a positive attitude during her studies. Other students explained that the digital platforms and elibrary were particularly helpful, particularly for students who have work and family commitments.

However, not all comments were equally supportive. Some students complained about the size of the library compared to university libraries. They noted that their colleges do not have many quiet study spaces in the library – we heard this from students at all colleges where we conducted interviews. Some students complained about campus life, with one student describing the atmosphere in her college as 'neutral'.

There were some complaints about the limited number of electives, and that the electives didn't cover a wide range of topics. For example, one complained that an elective course can be "a headache when you absolutely had no interest in a course but you had to take it for credit."

Students identified challenges in studying that stem from the complexities of their own lives. One challenge is that many were employed, with some employed fulltime. Apart from the challenges they personally face in finding time to study, they also felt that colleges could be more flexible in understanding the difficulties in juggling work and study, particularly in terms of class time and registration status. One of the effects of this situation, according to one interviewee, is little attachment to college. One interviewee explained that, "I commuted to [name of college] every day. I felt unattached to the college itself, not to my faculty".

Another key challenge students identified with studying a degree in college was the public perception of college degrees and status. They worried that employers may not understand college degrees, and some worried that universities may not accept them for entry to a masters. The impact of status and public perception on students' identities as higher education students is discussed in the next section.

Students' identities and status

Students' identities are shaped by complex interactions between their life histories, the social resources that are available to them in their families and networks, their aspirations, social relations of inequality and privilege and the hierarchal structuring of higher education in which universities have a higher status than colleges, and within the university sector, some have a higher status than others. The narrative of contingency is spread throughout the student interviews. While some were absolutely certain about the field they wanted to enter (for example, one student's only ambition was to work in the golf industry), many were not, or they had a vague idea of the field they were interested in. They relied on informal knowledge from significant others – teachers, friends, colleagues and acquaintances, late in the game. Overall, proximity, finances, entry requirements, and the applied curriculum shaped their choices. However, this was not the case for all students. Some had come from families where their parents had been to university and they had family resources they could call upon. In this case they had to explain to their perplexed family why they were going to a college and not a university. For example, one student explained that when they tell their family that they are doing a degree at a college, that their reaction is:

> "...you're doing a degree where? I say at [name of college]. Then I feel they take a step back. But I think it's just kind of surprise. I guess it's because [name of college] is known for its business programs, not kinesiology."

Another student explained that:

> "I tend to tell people that I'm doing a degree at [name of college]. However, there are moments I find it funny to be in a college. My in-laws are highly educated and sometimes I get the feeling they might say 'who's that person'?"

The hierarchical structuring of colleges and universities means that when embedded choosers choose to study a degree at a college instead of a university, that they must explain and justify their decision; it is

outside the 'normal biography' and the cultural script in which participation in university is a normal and necessary part of their trajectory (Ball, Reay, and David 2002). This situates degrees in colleges as something that contingent choosers do, not embedded choosers.

Undertaking a degree at a college is consequently something that makes sense for students who are perceived to be disadvantaged, while it doesn't make as much sense for students for whom university is the next expected step. This outcome arises from the interaction of the access mission of colleges, with the hierarchical structuring of the higher education system. We are not arguing against colleges' access mission (far from it); rather we are trying to theorise and explain why it is perceived to be normal for disadvantaged students to go to college, but less expected of students from more privileged backgrounds.

Students' identities as higher education students who are undertaking a college degree is strongly shaped by perceptions of status; either they worry about the lower status of their degree; or they don't care about the status of their degree, but their families and friends might; or they don't worry about their status of their degree, but employers might, or 'others' might. They all talked about status. Some expressed a concern that university perceptions of their degree meant they may not be able to get into a master's program.

Students' identities are reflected in their responses to being asked what they tell others they do. Some students expressed annoyance that they have to explain their programs and deal with the status issue, even if they didn't care so much. Many students start by identifying with the field of practice they are hoping to enter, then they may tell people that they are doing a college degree. For example, one student explained:

> I tell others that I'm a golf professional in the private golf industry. **[And what if they want more details?]** Then I say I'm a student at [name of college] – if it comes up. I tell them I'm studying a business degree. I don't mind telling people I'm doing a degree at college.

> I tell them I am studying at the Mechanical Systems Engineering program at [name of college]. They say "is there such a program?" I said "Yes, there is. It is not so difficult to get in, but it will be difficult to graduate."

In part this is a consequence of the newness of college degrees. However, colleges can't escape the hierarchical structuring of higher education. In the long run, college graduates will build the reputation of college degrees. However, policy can contribute to 'normalising' degrees in colleges, by helping to make it a more mainstream part of provision though enabling colleges to offer degrees on a greater scale. We return to this issue in the last chapter.

7. Opportunities and challenges of degrees in colleges

This chapter discusses the opportunities and challenges facing colleges in offering bachelor degrees. It does not discuss issues associated with the accreditation and the PEQAB process, as this was the focus of chapter three. It commences by exploring the perceptions of policy leaders, institutional leaders and faculty members on why colleges offer degrees and the contribution it makes to the access, for the workforce, and for colleges' communities and regions. This includes a discussion of the distinctive characteristics of college degrees. It then moves to discuss the challenges colleges face with this provision including perceptions of the community and employers, status, and relations with universities. As with all students we interviewed, all policy leaders, institutional leaders and faculty members who we interviewed discussed status. The chapter spends some time discussing colleges' relations with universities, and the dilemma about whether colleges should offer masters degrees or whether they should focus their efforts on convincing universities to provide pathways to masters degrees.

The chapter then focuses on challenges and opportunities within colleges. It examines changes to the nature of the institution, and discusses the issue as to whether colleges are drifting in their mission. It uses a typology we first introduced in Australia to explore the challenges colleges face, which designates institutional type by the amount of provision they have which is normally associated with the other sector. Single sector institutions are those with 97% or more of their provision in their main sector; mixed sector institutions are those with between 3 – 20% of their provision in the other sector; while dual-sector institutions are those with 20% or more of their provision in the other sector.[26] This is helpful in understanding the challenges colleges face in institutionalising the demands and requirements of the other sector. It is also helpful in exploring the potential inherent in mixed-sector in developing scholarship, research and pathways for faculty as well as for students. It addresses the issue as to whether there are 'two tiers' emerging in colleges – those with PhDs who teach degrees while they may also teach diplomas and those without who teach only in diplomas. It explores the organisational location of college degrees, changes to (and challenges arising from) recruitment practices, policies and processes.

The contribution college degrees make to students, the workforce, communities and regions

There is remarkable convergence among all participants in the project about the nature of college degrees and the contribution they can make. Almost all policy leaders, institutional leaders and faculty agree that college degrees can open access for students, that they are more work-focused with an applied focus and pedagogy, and that students benefit from paying lower fees.[27] They argue that college degrees are crucial in helping colleges fulfil their mandate for ensuring that students from disadvantaged backgrounds have access to higher education, and also to degrees. Despite the emphasis

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[26] This framework has become part of the policy language in Australia since we first introduced it in a similar project we undertook in 2008/9 (Moodie 2009, 2010, Wheelahan et al. 2012, Wheelahan et al. 2009a, b). See Voced for the range of literature that now uses this framework: http://www.voced.edu.au/search/site/text%3A%28%22mixed-sector%22%29 viewed 19 June 2017.

[27] The applied and more work-focused orientation of college degrees is not really questioned, but perhaps it should be problematised to a greater extent so that there is discussion on the nature of knowledge that students can access to ensure that students have access to the theoretical knowledge they need to participate in debates and controversies in their field of practice and in society more broadly and to progress to higher levels of study. The issue is one of balance. However, this is the topic of another project! See: Wheelahan (2016).

by government on pathways and the funding for the Ontario Council for Articulation and Transfer, they argued that universities still did not provide sufficient pathways for college students despite more than 20 years of government exhortations seeking this outcome. If universities weren't going to provide college students with opportunities for degrees, then colleges would have to do that for them.

They argued that colleges' more supportive pedagogy in degrees than university degrees was an important contribution. This provided some students with access that they would not otherwise have, and it ensured that the system as a whole had opportunities for all students because it could meet a broader range of learning needs and orientations. Students were guided along a continuum that resulted in them being independent learners who could undertake research by the end of their degree, even if they did not start out in their degree in that way.

The access role particularly mattered in regions where there were few universities. College leaders and faculty members argued that they had an obligation to provide degrees so that their local community had the opportunity for this level of study. Without them, students would have to move away, and local industries would not have the same opportunities to collaborate.

Interviewees argued that college degrees can play a distinct role in meeting workforce needs. This is achieved through the curriculum, but also through the program advisory committees that include local employers who advise the college on the development of the degree. Students' work-placements ensure that they build social networks in their industry and that they develop a good understanding about the nature of their field of practice and have the opportunity to apply their knowledge and skills in practical settings. Participants argue that college degrees contribute to differentiation and choice within the province because they are a different type of credential. They argued that college degrees are an extension of their original mandate, because they support access and they are work-focused provision which seeks to meet industry needs and have strong connections with industry and encourages entrepreneurship.

Dissenting voices

However, there were some dissenting views. One policy leader argued that college baccalaureates had very small numbers of students and graduates, and that their contribution was more symbolic than real. This person argued that we needed to undertake a cost-benefit analysis *at the level of the system* about the best way of providing access; perhaps this effort could be put into pathways even if this approach had only achieved limited results thus far. There still had been progress. Offering degrees has also only achieved limited results, and their growth really depended on the extent to which government could make the necessary investments. Nonetheless, this person could also appreciate the value of an applied baccalaureate as contributing to the province's suite of credentials.

As discussed in chapter four on curriculum, there were several interviewees who thought that the range of electives that colleges offered was too narrow. This limited students' flexibility and undermined the liberal purposes of college education. And, as was noted in the previous chapter, some students found the choice of electives they could undertake to be too narrow.

Telling the story

Two key related challenges facing colleges in offering degrees were first, that college degrees weren't very well understood by the community or by employers. The second related issue is that college degrees have an image problem; the issue of status of college was raised again and again. One college leader explained the problem in getting the story out in this way:

> College degrees are one of the best kept secrets in the education system. Most people know that the postsecondary system consists of universities and colleges, but their idea of what a college is may be 45 years old. The binary system is a barrier to getting up to date information about opportunities into the hands of prospective students. Getting accurate and up-to-date information about colleges degrees to people is an uphill battle due to historic perceptions and the way that information about postsecondary education is provided. Even when people find out that colleges now award degrees, some are sceptical because historically colleges have not been associated with degrees.

This comment was very typical of the views of participants. And, related to this was the comment that recruiting students was raised as a challenge by many participants. In part this is because potential students and parents and employers didn't understand college degrees and in part because of perceptions that it is 'not a real degree' or that it is second-rate provision that is not on a par with university degrees. While good publicity and better awareness can begin to address this issue, and perceptions will change once college degree graduates become more widespread throughout the workforce, this still won't overcome the hierarchical structuring of the sectors in which universities are regarded as higher status institutions, with vocational provision as lower status provision. This is the way things are in all liberal market economies with similar systems to Ontario's (Wheelahan and Moodie 2017).

Relations with universities; what about masters' degrees?

There were different perspectives on colleges' relations with universities. Some thought that the relationships were more competitive than cooperative, others thought they were becoming cooperative, while others thought that they were both competitive and cooperative. Illustrative examples were offered of all three types of relationships. For example, one institutional leader argued that:

> Ontario universities have been antagonistic to colleges offering degrees. They felt threatened by college degrees because they believe that this is their domain. At least initially, universities tried to exclude colleges from events presenting degrees to high school students. Universities have not accepted college degrees as comparable to university degrees out of snobbery.

An institutional leader at a different college, which in this case was a big GTA college, explained that;

> Generally, offering degrees has opened up other opportunities in relationships with universities. The college has great working relationships both with universities in the GTA and with universities in other parts of the province.

Others thought that universities were relatively indifferent to what colleges did and that they didn't really understand what colleges were doing with degrees. For example, one institutional leader said that:

> The universities don't seem to pay much attention to college degree programs. The universities don't see the colleges as a threat, especially within the GTA.

However, this may not be the case in regional areas, particularly those where there was not a lot of demand for higher education, and thus tighter competition for students. For example, one institutional leader said that:

> "With small universities the main competition is with colleges and this isn't helpful, especially if the college offers degrees that are similar to neighbouring universities."

Some interviewees, institutional leaders and faculty members, thought that colleges and universities were both changing so that the distinct and hard lines that separated institutions and types of provision were starting to blur. One interviewee, in what was a representative comment, explained that;

> More university programs are offering co-operative education and applied studies. Both types of institutions are inspiring change in each other. For example, universities were offering more co-operative education programs and applied studies, which colleges were incorporating more research in their baccalaureates.

A recurring theme in interviews with institutional leaders and faculty (and students) was the extent to which universities were prepared to provide college degree graduates with access to masters' degrees. Overall, this wasn't easy to achieve, although it varied by program. For example, one interviewee explained that:

> Universities' acceptance of college degrees for admission to their masters' programs differs by school and is a learning process: colleges need to teach universities about their degrees.

We asked our interviewees whether they thought that colleges should offer masters degrees. Overall, there was reluctance by participants to consider this issue because they argued that masters' degrees were research oriented programs, and that this would result in mission drift if college were to engage in this provision. While most interviewees thought that applied research was central to college degree provision, they thought that offering masters would tip the balance too far in that direction. Some argued that if colleges were to offer masters' degrees it would make them more like universities. Others thought colleges could do so in the future, but that they weren't ready yet. For example, one college leader argued that: "Applied degrees are new. It may be better that we learn to walk before we run and have people see the value of this credential." However, this interviewee provided an important caveat:

> However, if we have trouble getting students into masters we may need to think about it, but that shouldn't detract from what we do. If universities won't take college degree graduates into masters it will drive masters' degrees in colleges. There will be a drive for masters in colleges if we can't get our graduates into masers.

Many institutional leaders and faculty members cast masters' degrees as research degrees, which is an interesting interpretation given that many universities offer vocationally specific masters (often without a thesis) to prepare students for a specific field of practice after they have completed a liberal arts degree. And, in other jurisdictions, colleges offer masters' degrees, particularly in systems which have parallel vocationally oriented higher education institutions offering higher level credentials alongside more academically oriented universities (Skolnik 2016c). It seems that this issue is beginning to be considered more seriously, and that it will be pushed along if universities are reluctant to allow graduates of college degrees into masters' programs.

Opportunities and challenges within colleges

This section explores opportunities and challenges with colleges. We have situated our discussion within a typology of institutions that range from single sector institutions with 97% or more of their provision in one sector; mixed sector institutions with between 3 – 20% of their provision in the other sector; and dual sector institutions with more than 20% of their provision in the other sector. Moodie (2009) used the relatively well-known concept of 'tipping point' (Grodzins 1958) to argue that when an institution's load in the other sector reaches 20% then the institution reaches the point where it must institutionalise all the requirements for that sector, develop policies and practices to support that sector, and develop cultures that will sustain it. Depending on where mixed sector institutions are on the continuum (how close they are to the 20%), it is much more difficult for them to institutionalise all the requirements for the other sector and arrangements for the programs in the other sector can often be handled as exceptions to their normal structures, systems and processes, even if they find these processes onerous and an obstacle to expanding their provision. Even if they are getting to the stage of institutionalising the arrangements for the other sector, it is these arrangements which are seen to be new and an imposition, whereas existing arrangements seem normal and are naturalized. The perception is that in the 'main sector' that the rules make more sense. These problems don't arise in single sector institutions, because when load is below 3%, most of the arrangements can be handled as an exception, and expertise is usually concentrated in a few hands. A problem arises however, if the staff with the expertise leave.

The big colleges in our project are clearly moving towards the 'tipping point' of institutionalising and normalizing the requirements for the other sector, even if they complain about them (a lot). The smaller colleges have a bigger issue, because it is hard to divert scarce institutional resources to build the necessary policy and institutional structures, cultures and expertise. One suggestion then, is that colleges be supported in developing the economies of scale they need to marshal the resources to institutionalise all the requirements of the other sector and to build the cultures they need to sustain them. The following discussion illustrates institutions that are mixed sector institutions that are making progress towards building the necessary frameworks, but where they are having to articulate what these frameworks are as part of the process of institutionalising and normalizing them.

In most institutions, degree programs were located in departments in their disciplinary or teaching area along with all other credentials. For example, one institutional leader explained: "Degree provision is integrated with the faculties. The faculties are building on their existing strengths in offering degrees. They have responsibility for a family of credentials." Teachers of degrees often taught in diplomas as well as degrees, but there were some teachers who mostly taught degrees.

While teaching was located in departments, most institutions had sought to develop central quality assurance frameworks that include degrees and diplomas (and other college provision) while responding to the different quality assurance requirements of each type of provision. They had also integrated all other functions of the college. For example one institutional leader explained that "Stakeholder feedback, OHS, library, resources, international office – all these things are integrated". Colleges have sought to build policies and processes that support all types of provision, but with the requirements for the degree setting the template. Many of the interviewees said that this had led to a richer policy framework, and had improved quality assurance across the institution as a whole. This is particularly the case with the scholarship of teaching – the increased emphasis on the scholarship of teaching was needed to support degrees (indeed, it is a PEQAB requirement), and had led to more scholarship across the institution. It had also led to many more opportunities for applied research, and this provided opportunities for all faculty and not just those teaching in degrees. Colleges were also supporting their faculty to obtain higher level degrees. Many institutional leaders and faculty argued that this enriched the institution as a whole.

However, some faculty felt as if 'two tiers' of faculty were emerging; those with PhDs who taught in degrees, and those without PhDs who didn't. A few without PhDs worried about whether they would be successful in getting a job in a college now, because they don't have the necessary credentials. They also worried about whether their diplomas had much of a future if the emphasis was increasingly on degrees. This concern may have some substance; for example, one of the policy leaders we interviewed wondered whether degrees would replace advanced diplomas. This interviewee suggested that advanced diplomas sometimes have a low graduation rate, and that this could be an indicator that it isn't a useful credential. The concern about 'two tiers' emerging also has parallels in Australia (Wheelahan et al. 2009a) and the UK.

The fact that the colleges now offer degrees has fundamentally changed recruitment policies and practices, as well as institutional policies on quality assurance and student progress. Again, this has parallels in the literature (Levin 2004). Colleges were seeking faculty members with PhDs (in the disciplinary field), in part as a consequence of PEQAB's requirements (see chapter 3). But this is a big challenge because it is hard to recruit faculty with the right mix of industry experience and an appropriate PhD. This was a strong view expressed in all institutions that offered baccalaureates. This creates lots of tensions. For example, one institutional leader explained:

> There is a tension – some PhDs appear not to respect industry experience and some industry people don't respect scholarly approaches. It is hard to recruit because it isn't just about the PhD – teachers have to have relevant industry experience, as well as teaching skills. Getting PhDs in accounting is hard.

Several faculty members thought that PhDs weren't particularly helpful for college teaching. For example, a faculty member argued:

> Freshly minted PhDs want to work in a university. It is a challenge to recruit quality faculty members. College faculty have been industry people in the real world. If we want to keep that it is hard to find someone with real world experience and a doctorate, and willing to accept college pay and the workload.

The issue about workload was raised by many interviewees (institutional leaders and faculty). The provincial wide industrial agreement makes no provision in the Standard Workload Formula (SWF) for extra preparation time faculty argue that they need to teach in degrees.[28] The extra funding that colleges receive for degrees is marginal.

And, colleges were seeking to expand their applied research. To do this they need to relieve faculty from teaching to undertake research, and creating the research infrastructure is costly. The want to expand their applied research because they see it as intrinsic to the mission of the college in supporting innovation in their local industries and communities; and because applied research was a fundamental part of their PEQAB accreditation requirements because honours degrees needed to be informed by a research culture with faculty who were, in one way or another, engaged in research (which can include the scholarship of teaching). For example, PEQAB's (2016a: 25) handbook for colleges states that faculty must: "engage in a level of scholarship, research, or creative activity sufficient to ensure their currency in the field".

Clearly, offering degrees has changed colleges; it has changed all aspects of colleges. How they recruit students and faculty, their policies and processes, their engagement with scholarship and research, and their relationship with universities. They have responded to demands by governments, the labour market and society for higher level credentials. The challenge that they have is to respond to credential creep (which they must do) without succumbing to mission creep. They argue that degrees are consistent with their mission to provide access to students, to provide provision that is relevant to the labour market, and to support lower costs for students and government. Meeting their mandate has required the development of new roles, particularly in applied research, and arguably colleges are better placed than universities to support local innovation (Moodie 2006).

However, colleges face many challenges in meeting the new requirements of their original mandate. This report has discussed these challenges in the chapter on accreditation and quality assurance, on students' experiences and perceptions and in this chapter. The next chapter is the final chapter and it considers the policy implications arising from the findings in this report.

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[28] They also argue this in other countries – see Wheelahan, Moodie et al. (2009a) and Wheelahan, Arkoudis et al. (2012) and (Bathmaker et al. 2008).

8. Discussion and Implications for policy

This chapter discusses the policy implications that arise from this research. It does so at different levels; at the highest level, we discuss the issue of system design. What kind of system would best serve the interests of Ontario? This discussion also considers whether colleges should remain as mixed-sector institutions or whether they should be supported to become dual-sector institutions so they can institutionalise the requirements for and build cultures to sustain degrees as well as their principal provision. We then move to more specific issues in discussing masters' degrees to explore the tensions associated with colleges offering degrees but not masters, in the absence of well-developed pathways to masters' programs in universities (although this varies). The next section discusses and offers suggestions to streamline the current accreditation process while ensuring the quality of outcomes. This is followed by a discussion about access, and whether current admission requirements for college degrees support colleges' access mission. It includes a discussion about the potential for 2+2 models (where access to the degree is via a two-year diploma leading to the third year of a four year degree) to support access and social inclusion. The final discussion offers some suggestions about aligning the requirements of both degree and non-degree provision to improve cohesion and coherence in the system.

What kind of system do we want?

Skolnik (2016c) argues that Ontario's system of postsecondary education is caught between the Northern European model on the one and the US model on the other. He explains that in European countries, colleges constitute a parallel sector of higher education that offer applied degrees and post-graduate credentials in contrast to the more academically oriented university sector. In contrast, the US model and those Canadian provinces that followed the US model, have structured their system so that it facilitates students' degree attainment through transfer arrangements with universities. While Ontario structured its system of colleges in 1965 to be parallel institutions, this has changed over time so that the emphasis now is on creating pathways between the sectors (without, however, changing the original system design). We are now betwixt and between without being either. In part, this is as a consequence of: changes to the labour market over time which has demanded higher level credentials and where the links between credentials and occupations are very weak (which reduces the need for specialized institutions) (Wheelahan and Moodie 2017); changes to society as more families seek to access higher levels of education to support social mobility (Marginson 2016); and, decisions made by government about the design of the system.

Ontario's colleges remain vocationally oriented institutions that offer vocationally oriented credentials, while its universities, in the main, offer broad based liberal arts degrees as the principal baccalaureate degree. This has created quite a lot of problems for pathways, and in part the establishment of the Ontario Council for Articulation and Transfer in 2011 was to help facilitate pathways and student mobility. At the same time as there was a growing emphasis on pathways, college baccalaureates were established to support access, workforce development and cost-effectiveness. The logic of this decision was to expand the parallel sector, rather than reinforce pathways (in part because the pathways strategy wasn't working effectively when colleges were first granted authority to offer degrees in 2000).[29]

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[29] See Skolnik (2004, 2005, 2010, 2013b) for a discussion of these issues.

However, this logic has not developed to its logical conclusion because there is a limit on the amount of provision colleges can offer as baccalaureate degrees – 15% for ITALs, and 5% for CAATs. At the same time, we do not have the institutionalised arrangements such as those in many states of the US and in Canadian provinces such as British Columbia to support student transition to degrees. The limit on degree offerings in colleges keeps firmly within the mixed-sector category, so that they don't have the economies of scale necessary to become a dual-sector institution. The transition to a dual-sector institution is needed to institutionalise and to create the policy and institutional frameworks and the culture needed to sustain provision in the 'other' sector.

Even though they do not have the economies of scale to support the thorough going institutionalization of requirements for degrees, colleges have had to, as a consequence of the accreditation requirements, change their policies and change their faculty recruitment practices to focus on those with PhDs. While recognising that PEQAB's requirements helped them to develop as degree granting institutions, many interviewees argued that the accreditation and the policies that are associated with it require colleges to fit into a university mould, rather than a degree granting vocational education institution. All the while, the principal reporting, accountability and funding requirements they must implement are those for colleges' non-degree provision.

We suggest that there needs to be policy consideration given to system design and whether Ontario wants a fully developed parallel system, or a fully integrated system. However, we also recognise that this is a long-term project. In the shorter term, we suggest that those colleges that seek to do so be permitted to expand their degree provision, at least to the extent that they can develop as dual-sector institutions, even if government feels the need to keep caps on the growth of college degrees. Not all colleges would seek to develop in this way, but a substantial number of colleges would do so. Currently, colleges face a chicken and egg problem in building demand for their degrees. On the one hand, demand for college degrees is relatively weak because they are not a well understood credential; on the other, because they can only ever be a small part of overall provision of the college sector, it will be hard to build awareness among employers and potential students about them. Certainly not all colleges will or should go down this route if it is not part of their institutional strategy or if it would not serve their students, region or employers. However, at present, colleges are not able to make this decision in partnership with their communities because the option is not available.

Access to masters' degrees

There is, arguably, a role for masters' degrees in colleges even if Ontario decides we should go down the European route and develop parallel systems with vocational colleges delivering high level vocational credentials; or, remain as we are. [30] The Master's degree is an ambiguous credential in Ontario. While it is often regarded as a research credential, many masters' programs are designed to either support entry to professional practice, or to support continuing professional development. Masters' degrees are designed to support students to develop higher level knowledge and skills to meet higher level demands in their field of practice.

The fact that colleges degrees must meet the Standard for an Honours Bachelor Degree in the Ontario Qualifications Framework makes it difficult to see the basis for unilateral rejection by universities of college degrees as an entry credential into masters programs. For example, at least one university

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[30] Vocational institutions in Northern Europe offer masters' programs for the industries and occupations they serve.

specifies that that the entry requirement into their masters programs is "a university degree". Many colleges interviewees reported that while they were able to negotiate pathways into masters' degrees with some departments in some universities for their degree graduates, that it was a very difficult, uneven and patchy process. If there are issues arising from gaps or important prerequisites, then these issues can be identified and addressed through the pathways development process.

In the long-run, if universities do not provide college degree graduates with access to masters, then colleges will be pushed into considering this, particularly as the master's degree becomes more important in accessing higher skilled jobs in the labour market. Colleges in similar jurisdictions such as Australia offer masters programs – not many, but some, and this demonstrates that this possibility will arise in policy discussions in Ontario at some time in the future as pressure grows for pathways for college degree graduates into masters.[31]

Rethinking accreditation

We heard many suggestions for improvement that focused on aligning the requirements of both sectors and revisiting the PEQAB accreditation processes. Many interviewees in the colleges, particularly those who have been involved in college degrees for a long time, recognised that PEQAB has made many changes to support colleges, to demonstrably and overtly express public confidence in degrees in colleges, and to more liberally interpret some of its requirements. They have developed a relationship with the College Degree Operating Group (CDOG) and this has been very beneficial.

However, it was suggested to us that some colleges have been offering degrees for some time and have developed mature policy and institutional frameworks and processes, and that they have a proven track record. Indeed, in many other jurisdictions quality assurance agencies have some sort of expedited program reviews for institutions that have a proven track record of successful submissions and monitoring of quality (Skolnik 2016a). Arguably, in these circumstances, it is an onerous burden and very costly for colleges and for the system to require a full review for every new program proposal for a college that has been through many program reviews and has been offering degree programs for more than 10 years. This is especially the case in areas where related programs have already been reviewed which contain the same breadth course information, staffing information and other shared requirements.

It was suggested to us that this repetition is not required by the Act, and that decisions could be made by PEQAB and/or Ministry to change current practice. There are various forms of expediting reviews: exempting classes of institutions and/or programs that meet certain conditions (e.g., offering degree programs for more than 10 years in BC); limiting reviews to only a few key standards (Netherlands); doing only 'desk' reviews, i.e., eliminating site visits (Alberta). Some form of expedited review could be developed through a study of procedures used in other jurisdictions and consultation between PEQAB and the colleges (Skolnik 2016a).

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[31] In Victoria, Melbourne, at least three TAFEs offer masters degrees: see Box Hill: http://www.boxhill.edu.au/our-courses/postgraduate-courses/; Holmesglen: http://www.holmesglen.edu.au/courses/higher_education/higher_education_programs; and Melbourne Polytechnic (a TAFE): https://www.melbournepolytechnic.edu.au/course-info/higher-education/master-degrees/ viewed 20 January 2017.

Some institutional leaders deeply involved in these processes argued that the emphasis in external review should be on college *processes* to ensure that the processes underpinned quality, rather than a direct measure of quality itself through detailed examination of inputs (syllabi, assessment, teacher credentials etc) and outcomes. This would bring external quality assurance processes into more alignment with universities. Where there were indications in the normal reporting that problems were arising, this could be a signal for a closer examination (for example, changes in KPIs), but in the absence of signals that problems were arising, it was a waste of resources to undergo the same level of accreditation and review every time, for every degree. It was also suggested that a lighter touch might be possible where the college program was undergoing professional accreditation. At the very least, the PEQAB's process and the external accreditation by the licensing/professional body could be brought closer together in time and some alignment of processes may be possible.

A first step towards lightening the load on colleges would be through an expedited review process, where the college has a proven track record.

Faculty requirements

In chapter 3 the team reported several college leaders stating that they had great difficulty recruiting enough faculty who had both the breadth and depth of industry experience they believe is necessary to maintain colleges' orientation to work, and the PhD or terminal degree needed to meet PEQAB's requirements. A rigorous application of this requirement helps to assure the public that the baccalaureates offered by Ontario colleges are of the same standard as university baccalaureates. Yet it makes it harder for colleges to offer programs that are distinctive and different from university baccalaureates in their strong orientation to work. Colleges do not have available standard recourses to recruit scarce and unusually highly valued staff of offering higher pay or more time for preparation, scholarship and applied research since colleges' funding and standard workload formula have not been adapted greatly to accommodate college baccalaureates.

College leaders stated that dual faculty recruitment requirements were more difficult to meet in some fields than in others. One possibility is for PEQAB to convene an examination of faculty requirements for a field in which colleges report particular difficulties with faculty recruitment. This study may perhaps be undertaken with the College Degree Operating Group and any relevant occupational association. The study might consider how widespread and serious any difficulty with faculty recruitment may be. If the study contemplates recommending changing faculty recruitment requirements for a field it should suggest what additional or alternative requirement might be adopted by the field to maintain confidence in the quality of college baccalaureates in the field.

Thinking about access

An issue that came up in several interviews was the restrictions placed on access and pathways through the accreditation process. PEQAB requires colleges to have admission requirements that are comparable to university admission requirements. This means that many college students would not be able to directly access college degrees if they were coming to PSE for the first time. One institutional leader explained that the admissions standards for their degrees were the same as those for university – high school graduates required the same number of grade 12 university credits to get into the college degree. Arguably, this undermines the colleges' access mission, and it defeats one of the core rationales for college degrees, which is to provide access to students who would not otherwise be able to access

degrees. The emphasis should be on standards students reach as a consequence of successfully completing the degree, rather than an over-reliance on the standard that they achieved at the end of school. A key distinguishing feature of pedagogy in college degrees was the small class sizes and more supportive pedagogy. This should be used to support students to transition to higher levels of independent study as they progress in their degree, not as a barrier to entry.

Linked to this is the question of pathways. Many interviewees argued that there were difficulties in developing pathways within the college from diploma to degree. Some said that it was as difficult in some cases as developing pathways to university degrees. This was because the accreditation process imposed constraints on how pathways could be developed. In particular, we found it very difficult to identify any 2+2 arrangements where entry to the degree was exclusively *through* the diploma. That is, a credential which comprised a diploma followed by the final two years of the degree, so that there was no direct entry into first year in the degree. Elsewhere we have argued that nested or laddered arrangements like this with guaranteed access from the diploma to the degree (provided students achieve a specified grade point average) support social inclusion and equity because students are required to meet only the admission requirements for the lower level credential, and not the higher-level credential (Wheelahan et al. 2016, Lennon et al. 2016). It may be worth considering a project in which colleges, PEQAB and ONCAT develop some pilots as a way of developing better understandings of the potential of this model and assuaging concerns about quality. This would certainly position college degrees as high quality programs that support access.

Aligning the sectors

We suggest that there is great potential for aligning the requirements for degree and non-degree programs. The diploma curriculum is currently an important part of the degree curriculum. Given this, it is dysfunctional to separate quality assurance for the two components. The research shows that student transition is smoother when there is alignment in the curriculum, assessment, and pedagogy between diplomas and degrees (Milne, Glaisher, and Keating 2006, Wheelahan 2009b), and this could be better achieved through considering each in relation to the other through an integrated quality assurance and accreditation process. The current arrangements are an impediment to better alignment of diplomas and degrees because each must meet very different standards and processes. The US system avoids this problem by placing quality assurance for 2-year and 4-year institutions under the same agency and QA framework. We understand that PEQAB and the Ontario College Quality Assurance Service are currently exploring how they can work together as the basis for working towards greater alignment, and this is a very promising development.

Finally, data collection

We are not going to raise our usual complaint about the state of data in higher education in Canada (although it is an important issue). We have two very specific, practical suggestions that will help to provide insights into the development of college degree programs and how they are serving students' needs, particularly in comparison to the way in which universities serve their students' needs. First, Statistics Canada and all other bodies that collect data in higher education should not define degrees as 'university degrees', because this excludes college degrees. It is impossible to distinguish between university degrees and college degrees in the National Graduates Survey, the National Household Survey and the Youth-in-Transition Survey. As the largest producer of college bachelor degrees, it would be helpful if Ontario raised this matter when it is consulted on possible revisions of these surveys.

It would also be helpful if the Ontario Ministry for Advanced Education and Skills Development reviewed its data collection to see if it is possible to develop more consistent approaches between colleges and universities. It is very difficult to relate colleges' Key Performance Indicators to university data. This would assist the policy development process, and it would assist universities and colleges at the sectoral level and the institutional level to understand how they are progressing.

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