Higher Vocational Education in Canada: The Continuing Predominance of Two-Year Diploma Programmes

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Introduction

This chapter suggests that higher vocational education in Canada may be viewed as consisting of five types of programmes offered by the country's colleges. After providing a brief overview of Canadian higher education, the chapter describes each of these five types and explains why the author considers them forms of higher vocational education. In the section that follows this overview, it is suggested that what is distinctive about higher vocational education in Canada is both the scale of short-cycle tertiary education programmes and some of the specific types of programmes offered. Equity concerns are also addressed, noting that while promotion of greater equity was a major motive for the development of some types of

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higher vocational education in Canada, the evidence for its contribution to greater equity is mixed. The final section of the chapter contains concluding comments.

Maintaining a national focus in this chapter is difficult because of the considerable regional differences in the nature and role of colleges and the unevenness of higher education data across Canada. The chapter gives disproportionate attention to higher vocational education in Canada's largest province, Ontario, because some types are found predominantly in Ontario; data for some of the aspects of education addressed in the chapter were more readily available for Ontario than other parts of the country; and because of the author's greater familiarity with higher vocational education in Ontario from more than a half century of study.

Overview of Canadian Higher Education

Canada is a federation consisting of ten provinces and three territories. Higher education in Canada is normally described as consisting of two distinct types of postsecondary institutions: universities and colleges. The universities, which can be traced back to the eighteenth century, or even earlier, have broad statutory authority to award degrees at the bachelor and higher levels. As of January 2020, Universities Canada, the organization that represents Canadian universities, had 95 member institutions.

By contrast, colleges did not exist until the twentieth century and most were not created before the last third of that century. In three provinces, colleges offer university-equivalent courses in arts and sciences that enable students to transfer to a university to complete a bachelor's degree, as well as career education programmes that prepare graduates for entry to the workforce. In the other seven provinces, colleges concentrate primarily on workforce preparation. In addition, colleges offer a variety of programmes and courses for academic upgrading, adult education, and community development. The credentials awarded most commonly by colleges are diplomas and certificates. The institutions in the college sector typically use the nouns college or institute in their name, and the national organization which represents them is Colleges and Institutes Canada (CICAN). As of January 2020, CICAN had 135 members, though some of the members were multi-campus provincial systems of colleges. A few former colleges that have attained university status are members of both CICAN and Universities Canada.

Canada does not have a comprehensive national qualifications framework. The closest it has to one is the Canadian Degree Qualifications

Framework, which was adopted by the provincial and territorial ministers of education in 2007 as part of the *Ministerial Statement on Quality Assurance of Degree Education in Canada (Council of Ministers of Education Canada* 2007*)*. Two provinces, Alberta and Ontario, have provincial qualifications frameworks that include credentials normally awarded by colleges, in addition to those traditionally awarded only by universities (Government of Alberta 2020; Ontario Ministry of Colleges and Universities 2020a).

Identifying Higher Vocational Education in Canada

The most straightforward way of identifying higher vocational education in Canada is to (1) examine the various forms of vocational education and training (VET) that could potentially qualify for the appellation 'higher' and (2) determine which of those forms merit that modifier. A difficulty with the first task is that in Canada the term 'vocational' is used primarily for apprenticeships or for programmes in secondary schools. Charest and Critoph (2010: 58, 67) note that 'vocational training is an imprecise term in the Canadian context', adding that apprenticeship is 'the one form of learning unequivocally recognized as vocational training in Canada'. However, by international standards, Canada has low rates of both apprenticeship and of secondary school vocational education (Lehman 2012). Only about one percent of secondary students start an apprenticeship, apprenticeships are used for only a limited range of occupations, and completion rates are very low (Charest and Critoph 2010).

A problem with the second task, determining which forms of VET warrant the appellation 'higher', is the lack of consensus regarding criteria for such determinations. Bathmaker (2017) suggests that the definition of postsecondary vocational education and training put forward in the OECD's *Skills Beyond School* report might serve as a definition of higher vocational education and training: 'the programmes and qualifications that prepare students for specific occupations or careers, that are beyond upper secondary level, and that would normally require at least six months full-time or equivalent preparation' (OECD 2014: 22). Two types of postsecondary vocational programmes described in the *Skills Beyond School* report that are of particular relevance to this chapter are vocational bachelor's degrees and short-cycle programmes that 'normally' are at International Standard Classification of Education (ISCED) level 5 (OECD 2014: 22). The linkage to ISCED level 5 poses a problem for

Canada, as one type of programme offered by Canadian colleges may meet the ISCED level 5 requirement for the 'complexity and specialisation of its educational content' (UNESCO Institute of Statistics 2012: 14), but not the requirement for minimum programme duration.

As Busemeyer and Schlicht-Schmälzle (2014) have noted, a lack of commitment to secondary vocational education and training may be compensated by greater provision of VET at the tertiary level. This is what has happened in Canada, as most vocational education occurs in colleges (Charest and Critoph 2010). Nomenclature commonly employed in Canada does not reflect the OECD recommendation to use the term 'professional education and training' to refer to postsecondary vocational programmes of more than six months' duration (OECD 2014: 13). As in the United States (Bailey and Berg 2010), the term professional education is reserved mainly for programmes offered by universities.

Possible Forms of Higher Vocational Education in Canada

The five forms of higher vocational education that are considered in this section are diploma programmes of two and three years' duration; one-year certificate programmes; graduate certificate programmes; and college bachelor's degree programmes.

Two-Year Vocational Programmes

The two-year vocational programme is the predominant offering of most Canadian colleges. The goal of these programmes is to provide graduates with the knowledge and skills for particular occupations. There are two competing conceptualizations of where this type of programme fits in the educational system. These conceptualizations, which in an earlier publication the author labelled the parallel and vertical models (Skolnik 2016b), date back to the institutes of technology, which were the predecessors of today's colleges.

The first technical institute in Canada was the Provincial Institute of Technology and Art, which opened in Calgary, Alberta, in 1916. The establishment of Canada's first institute of technology so much earlier than any of the others was intimately tied to the rivalry between Alberta's two largest cities (Baker 2011; Smith 1990). When Calgary lost out to

Edmonton in the struggle over the location of the capital city in the new province in 1905, Calgary leaders believed that it was only fair for it to get the provincial university and were disappointed by the decision of the legislature to also locate the University of Alberta in Edmonton. When civic leaders in Calgary subsequently sought the establishment of a junior college that could eventually become a university, the government appointed a Royal Commission to consider the matter. The commission, which consisted of the presidents of the flagship universities in three other provinces where the proliferation of universities was a concern, recommended against conferring degree-granting powers on a new college in Calgary.

However, the commission offered a consolation prize. It suggested that because of the 'substantial interest manifested by the citizens of Calgary in the improvement of educational facilities in their city', and because of the demand for more instruction in 'technological, social, economic and allied subjects', an institute of technology and art be established (Smith 1990: 295). The Provincial Institute of Technology and Art was thus established as an alternative to the existing university.

The next technical institutes in Canada were not established until the 1940s when some communities in Ontario sought support from the provincial government for training for local industries, particularly forestry, mining, and textiles. In responding to these requests, and subsequently in developing a system of technical institutes, the government drew upon the advice of Professor C. R. Young, Dean of the Faculty of Applied Science and Engineering at the University of Toronto (Ryerson University 1978; Young 1944). Young maintained that there was a serious gap in technical education in Canada between the secondary schools and the university schools of engineering. He recommended the establishment of a system of institutes of technology that would offer programmes that varied in length from one to four years. The programmes would prepare graduates for supervisory roles in industry and also for 'technical functions such as drafting, design of details, laboratory testing, inspection, construction in the field, or the technical aspects of sales work' (Young 1944: 150). Young viewed these institutions as comprising an intermediate component of the educational system and believed there should be provision for graduates of technical institutes to subsequently transfer to a university and complete an engineering degree.

As the early institutes of technology evolved into a larger and more complex system of colleges, these two conceptualizations of the relationship between colleges and universities persisted, with government at times

emphasizing one or the other, and sometimes both. For example, when the Ontario government established its present system of colleges in 1965, the Minister of Education referred to the colleges as completing the system of education 'extending from the kindergarten to the postgraduate level' (Ontario Department of Education 1967: 8). The Minister also saw colleges as 'a new kind of institution that will provide, in the interests of students for whom a university course is unsuitable, a type of training which universities are not designed to offer' (Ontario Department of Education 1967: 11).

Each of these conceptualizations has shortcomings. The vertical conceptualization is of dubious applicability if there is no pathway from the vocational diploma to the university bachelor's degree. This was the case when Ontario's colleges were established, as no provision was made for college students to transfer to university (Fleming 1971; Ontario Department of Education 1967). As of 2013, Trick noted that 'to date it has not been Ontario government policy to use colleges as a significant means of providing access to university' (Trick 2013: 5). Graduates of two-year diploma programmes in Ontario have a difficult time obtaining transfer credit at universities, and in 2014–2015, only 5.5 percent of graduates transferred to a university (McCloy et al. 2017). Graduates of college vocational programmes appear to have better access to universities in British Columbia (Cowin 2018) and Québec (Bégin-Caouette 2017) than in Ontario, but overall, nationally the situation is problematic.

The problem with the parallel conceptualization is the ambiguity of the term 'alternative' with respect to a form of education that is said to be an alternative to university. In the parallel conceptualization, the college vocational programme may be deemed so different from a traditional university undergraduate programme that the programmes of the two institutions cannot be compared on a common scale.[1] But if the quality or standard of the vocational alternative cannot be measured on the same scale with which university programmes are assessed, on what scale can it be measured?

Judging whether the two-year vocational diploma is a form of higher vocational education is different for the two conceptualizations of its place in the educational system. In the vertical conceptualization, the college diploma would be a higher credential in that it is normally pursued after completion of secondary school, not necessarily in the sense that the majority, or even many, of the courses in the programme would have been recognized for credit by a university. In the parallel conceptualization, the

justification for calling two-year vocational programmes a form of higher vocational education would be that these are signature programmes of what government regards as one of the two sectors of Canada's higher education system. In addition, experts in vocational education, employers, and practitioners regard them as providing an appropriately high level of vocational education. Drawing upon both conceptualizations, it would appear that the two-year diploma programmes of Canada's colleges fit within ISCED level 5 and thus within the definition of higher vocational education noted earlier.

Three-Year Diplomas

Although the two-year vocational diploma is the most prevalent credential in Canadian colleges nationally, there are also some three-year diplomas. In several provinces there is a smattering of programmes of three, or in some cases two and a half, years, presumably for fields where two years is insufficient for the coursework deemed necessary. In Ontario, college programmes of three years' duration are common and lead to a distinct credential: advanced diploma.

The Ontario Qualifications Framework (OQF) differentiates between a bachelor's degree, which must be six to eight semesters in duration, and an honours bachelor's degree, which requires eight semesters or more. Programmes of three years' duration constitute a small but not insignificant proportion of bachelor's degree programmes offered by Ontario universities. The conclusion of curriculum analyses undertaken by the association of Ontario colleges was that many of the sector's advanced diploma programmes either met the provincial standard for the three-year bachelor's degree or, with minor adjustments, could meet that standard (Colleges Ontario 2012). Colleges Ontario also found that internationally, three-year bachelor's degree programmes were quite common, while three-year diploma programmes were 'extremely rare' (Colleges Ontario 2012: 8). Based on its research, Colleges Ontario recommended that the colleges be allowed to convert advanced diplomas, on a case-by-case basis, into three-year bachelor's degrees. While the government did not accept that recommendation, the apparent similarity of the three-year diploma to the three-year bachelor's degree makes the rationale for regarding the three-year diploma as a higher vocational education credential even stronger than the rationale for viewing the two-year diploma that way.

One-Year Certificates

It was noted earlier that in Dean Young's vision of the technical institutes that were the precursors of today's colleges, the space between secondary school and university would include programmes that ranged in length from one year to four years. Vocational programmes of one year's duration are quite common in Canadian colleges. While these programmes are of shorter duration than what is normally required for ISCED level 5, they may meet its requirements for complexity and specialization of educational programmes. For example, in the Ontario College Certificate in Rural Recreation, graduates must acquire the knowledge and skills necessary 'to plan, organize and deliver inclusive recreation, leisure and wellness programmes and events that respond to identified needs, interests, abilities and available resources in remote or rural communities' (Ontario Ministry of Training, Colleges and Universities 2014: 5). The standards for the Ontario College Certificate in the qualifications framework include references to the application of 'a variety of thinking skills in a systematic approach to anticipate and solve problems' (Ontario Ministry of Colleges and Universities 2020a). Perhaps for these reasons, despite being of less than two years' duration, Canadian college certificate programmes are treated as short-cycle tertiary education in reporting statistics on educational attainment, although not in enrolment statistics (Statistics Canada 2017). Thus, there are grounds for viewing one-year certificates of Canadian colleges as a form of higher vocational education, even if those grounds may not be as strong as for longer duration diploma programmes.

Graduate Certificate Programmes

Graduate certificate programmes[2] are designed to meet the employability needs of individuals who have completed a bachelor's degree in a university or a diploma in a college. Many of these programmes require a bachelor's degree for admission, and in Ontario more than three-quarters of those enrolled in graduate certificate programmes possess a university degree (Wheelahan et al. 2017).

As of January 2020, the CICAN website listed 762 graduate certificate programmes, the majority in Ontario, and the next most in British Columbia (CICAN 2020). The programmes are intended to provide practical skills in specific job fields. In Ontario, the graduate certificate 'focuses on a narrow range of skills, and yet teaches these skills in depth'

(Thorsell 2015: 75). Examples of programme titles are Big data analysis, Bioinformatics, Brain disorder management, Brand management, Broadcast journalism, and Building information modelling. The programmes are typically of one year's duration. Many of the students are graduates of university arts programmes, and they seem to be attracted by the opportunity to gain technical skills that may improve their employment prospects (Toor 2020).

According to the OQF, the learning expectation of the graduate certificate programme is 'a level of knowledge and skill that enhances one's ability to perform a more specialized range of complex and non-routine activities within the field' (Ontario Ministry of Colleges and Universities 2020a). The placement of this type of programme in the OQF is at level 9, between the advanced diploma and the bachelor's degree. Toor (2020) has pointed out the irony of the graduate certificate being below the bachelor's degree in a hierarchical listing of qualifications when the latter is frequently required for admission to the former. Given it normally builds upon the bachelor's degree and is clearly vocationally oriented, the graduate certificate would seem to be a higher vocational education credential.

College Bachelor's Degree Programmes

Until the last decade of the twentieth century, one of the main factors that differentiated colleges from universities was that universities were authorized to award degrees while colleges were not. Beginning in the mid-1990s, colleges in some provinces were given limited opportunity to award applied bachelor's degrees. While the word 'applied' has not been formally defined in these authorizations, it is generally taken to refer to educational programmes that prepare graduates for specific types of occupations. Presently, there is some provision for colleges to award bachelor's degrees in seven provinces, but the great majority of college degrees are awarded in two provinces, Ontario and British Columbia. Excluding the programmes of university members of CICAN and collaborative programmes in which a university partner awards the degree, 32 colleges across Canada offer a total of 167 bachelor's degree programmes (see CICAN 2020), of which close to two-thirds are in Ontario. In 2016, college bachelor's degree programmes accounted for 5.7 percent of Ontario college enrolment and about 4 percent of all bachelor's degrees in the province (Wheelahan et al. 2017).

Although there has been a recent trend towards somewhat broader degree titles like Bachelor of Design or Bachelor of Information Technology, many of the titles of college bachelor's degrees in Canadian colleges refer to a very specific application: Bachelor of Applied Technology in Geographic Information Systems; Bachelor of Applied Technology—Architecture—Project and Facility Management; Bachelor of Health Care Technology Management; and Bachelor of Early Learning Program Development.

Each bachelor's degree programme proposal must go through an intensive assessment. The difference in goals and pedagogy between applied programmes like the ones just noted and traditional university bachelor's degrees can raise issues in these assessments. Some jurisdictions have attempted to deal with these issues through such means as differentiating between learning expectations in applied and academic bachelor's degree programmes or having different sector agencies review the different types of programmes (Skolnik 2016a). Only in Alberta is there some difference in degree standards between the applied degree programmes of the colleges and the traditional degree programmes of the universities. For example, there is a recognized difference in the qualifications needed for faculty who teach in applied degree programmes (Campus Alberta Quality Council 2019).

A programme approval process in which colleges must demonstrate that their proposed bachelor's degree programmes meet the norms of a traditional university degree programme could constitute a coercive isomorphic force for academic drift. In this case, the type of academic drift that would be of particular concern would be that noted by Harwood (2010: 413): '[a] process whereby knowledge which is intended to be useful gradually loses close ties to practice while becoming more tightly integrated with one or other body of scientific knowledge'. Harwood suggests that this type of academic drift has been common in many fields of practice, including agriculture, engineering, medicine, and management.

In Ontario, college bachelor's degree programmes must meet exactly the same degree standards as traditional university bachelor's degree programmes and, in addition, the college programmes must satisfy other requirements such as the inclusion of work experience (Postsecondary Education Quality Assessment Board 2019). Colleges have expressed concern that the existing standards are 'over-weighted toward the academic culture of research universities' (Crow et al. 2011: 18). One of their major concerns has been that it is often difficult to recruit faculty with the right

mix of industry experience and the kind of doctoral degree expected by the assessment body. The substitution of faculty with a PhD in an academic field of science but no industry experience for faculty with relevant experience could contribute to the type of academic drift described by Harwood.

What Is Distinctive About Higher Vocational Education in Canada?

While there are no published figures at the national level for enrolment or graduations for all of the five types of programmes described in this chapter, such figures are available for Ontario. Table 1 shows the percentage distribution of graduates by programme type for 2013 and 2017.

Although the share of graduates from diploma programmes declined slightly over this four-year period, in 2017 these programmes still accounted for almost half of higher vocational education graduates and almost three times the percentage for the next largest category. While a decline in the advanced diploma share was expected as a consequence of the development of bachelor's degree programmes, it is noteworthy that so many students still pursue the advanced diploma when the bachelor's degree takes only one year more. It is possible to obtain a national figure for the combined total of all kinds of diplomas, and nationally graduates of diploma programmes constituted 66.9 percent of higher vocational education graduates (see Statistics Canada 2020) compared to a total of 63.9 percent for the sum of diploma and advanced diploma graduates in Ontario. The largest increase shown in Table 1, more than four percentage points, is for the graduate certificate.

Table 1 Percentage distribution of graduates in higher vocational education, Ontario 2013 and 2017

	2013	*2017*
Diploma	51.1	49.1
Advanced diploma	16.1	14.8
Bachelor's degree	1.8	2.9
Graduate certificate	11.3	15.9
Certificate	19.7	17.3
	100.0	100.0

Source: Derived from Ontario Ministry of Colleges and Universities (2020c)

While it was not possible to obtain international data on enrolment or graduations from comparable programmes in most countries, international data on short-cycle tertiary education attainment could be used as a surrogate for estimating the relative scale of diploma and certificate programmes in different countries. In 2016, Canada had the highest percentage of the population aged 25–64 whose highest level of education was short-cycle tertiary education of any OECD member country (OECD 2017). Canada's rate of short-cycle tertiary education attainment was 26 percent, more than three times the OECD average of 8 percent, and only three countries had rates that were more than half of Canada's. The high rate of short-cycle tertiary education attainment is largely a reflection of the role of Canada's colleges in providing higher vocational education (Skolnik 2020).

Canada's high rate of short-cycle tertiary education attainment compared to other OECD member countries stands in contrast to its relatively low rate of college bachelor's degree activity. Earlier it was noted that in Ontario, the province with the greatest number of college bachelor's degrees, colleges account for only about four percent of all bachelor's degrees (Wheelahan et al. 2017). In contrast, in some countries, tertiary education institutions other than universities account for a large proportion of bachelor's degrees. For example, more than half the baccalaureate degrees in Finland are awarded by the universities of applied sciences (Statistics Finland 2020a, b). The comparison with Finland is of interest because, until the mid-1990s, technical colleges in Finland played a similar role as colleges in Ontario. However, with the reorganization of the former technical colleges into a system of polytechnics there was a shift of emphasis from short-cycle education to bachelor's degree programming. By 2015, the new institutions were the major providers of bachelor's degrees in Finland, but the short-cycle tertiary education attainment rate for the 25 to 34 age group, which reflected more recent trends, had declined to zero (OECD 2016).

Besides Finland, other examples of countries with high rates of vocational bachelor's degrees and negligible rates of short-cycle tertiary education are the Netherlands and Germany. Canada has a quite different pattern, with a very high rate of short-cycle tertiary education and a relatively low rate of vocational bachelor's degrees. Neither approach seems fully consistent with the OECD's advice for the provision of higher vocational education. Countries are advised to offer short-cycle programmes in 'a tier of institutions separate from universities' and 'make use where

relevant of the successful model of universities of applied sciences' (OECD 2014: 14). A generous interpretation of this pattern would be that, in regard to adopting elements of the university of applied sciences model, Canada has been overly restrictive in its interpretation of 'where relevant', while short-cycle tertiary education has gotten lost in the rush in many European countries to implement the degree structures of the Bologna Process.

The organization of higher education in Canada is broadly similar to that in Anglophone countries such as the United States and Australia. While the short-cycle tertiary education attainment rates in those countries are a little less than half of Canada's rate, in all three countries, colleges started offering bachelor's degree programmes at close to the same time and have similarly low rates of baccalaureate production (Floyd and Skolnik 2019; Wheelahan et al. 2009).

Canada's graduate certificate programmes are located mainly in just two provinces and constitute a relatively small proportion of higher vocational education nationally. Quantitatively, what is most distinctive about higher vocational education in Canada is the scale of college diploma programmes, which is extraordinary by international standards. This is especially significant given many other countries, which were once heavily invested in short-cycle tertiary education, have scaled back or virtually eliminated such programmes in favour of bachelor's degree programmes.

Equity Concerns

The establishment of provincial systems of colleges in Canada in the 1960s was part of a worldwide movement to develop new types of postsecondary institutions that would be more explicitly industry-focused than traditional universities and that would be more accommodating to the types of learners who were under-represented in universities. A priority for the new institutions was to provide higher education to those who, in the absence of these institutions, would not likely participate in it. The effort seemed successful in economic terms as graduates of college diploma programmes in Canada attained higher earnings than they likely would have if they had stopped their education after high school. Studies of the earnings of postsecondary graduates about two decades after the opening of the colleges found that rates of return for investment in a college diploma were comparable to, or in some cases higher than, those for a university degree (Boothby and Rowe 2002; Vaillancourt 1995).

In spite of such findings, by the mid-1990s the equity concern pertaining to colleges had shifted from providing higher education to those who might not otherwise be able to partake of it, to facilitating bachelor's degree attainment for the types of students who are more likely to attend a college than a university. These are people from low-income families; first-generation postsecondary students; Aboriginal people; persons with disabilities; racial and ethnic minorities; persons who had been unsuccessful in previous academic studies; single-parent families; and persons living in rural areas (Clark et al. 2009; Colleges Ontario 2015; Norrie and Zhao 2011).

The effort to improve opportunities for bachelor's degree attainment for college-bound students included both attempts to improve pathways from college to university and enabling colleges to award bachelor's degrees. The first colleges that were allowed to offer bachelor's degree programmes were in rural areas of British Columbia, where bachelor's degree attainment rates were lower than in the major urban areas, particularly for Aboriginal people (Dennison 1997). The first study comparing earnings of graduates of college bachelor's degree programmes with graduates of university programmes, which covered college programmes in British Columbia, Alberta and Ontario, showed that, on average, college graduates were earning about 12 percent more than graduates of university programmes two years after graduation (Frenette 2019). Most of the difference in overall average earnings could be explained by the fact that college graduates were more concentrated in higher earning fields such as business, management, public administration, and health.

It is difficult to say how much allowing colleges to award bachelor's degrees has improved opportunities for groups that were traditionally under-represented in universities to earn a bachelor's degree. This is due to the lack of comparative data on the characteristics of graduates of college and university bachelor's degree programmes. Interviews with college leaders in Ontario revealed that making bachelor's degree programmes more accessible to under-served populations was a major consideration in the design of the programmes, but evidence on the extent to which this goal was actually realized is quite limited (Skolnik et al. 2018). Some data could be found by comparing responses to the 2015–2016 Ontario Student Satisfaction Survey (see Wheelahan et al. 2017) in the college sector with information on 2014 university graduates from the 2016–2017 University Graduates Survey (Ontario Ministry of Colleges and Universities 2020b). These surveys provided data on whether the students/graduates

had physical, mental, or learning disabilities, whether they identified as Aboriginal, and/or whether they were first-generation students.[3] The surveys did not capture family income or parental occupation. Almost the same percentage of college bachelor's degree students and graduates of university bachelor's degree programmes identified as Aboriginal (about 2 percent); a slightly higher percentage of the university graduates (27 percent) than of college students (25 percent) were first generation; and a higher percentage of college students (14 percent) than of university graduates (8 percent) had disabilities. On the basis of this limited set of indicators, college bachelor's degrees appear to be addressing inequities in regard to physical, mental, or learning disabilities but not necessarily in other respects. Moreover, the capacity of college bachelor's degree programmes to substantially reduce socio-economic disparities in bachelor's degree attainment in Canada is limited by its small scale. In the words of one policy leader, this makes its contribution 'more symbolic than real' (Wheelahan et al. 2017: 65).

The limited data available show also that higher credential programmes in colleges tend to have relatively fewer disadvantaged students than lower credential programmes. Compared to diploma programmes, both bachelor's degree and graduate certificate programmes have lower proportions of first-generation students; lower proportions of students with disabilities; and lower proportions of Aboriginal students (Wheelahan et al. 2017). The percentage of first-generation students is nearly 50 percent higher in diploma than in degree programmes, and the percentage of students with disabilities in diploma programmes is more than double the percentage in graduate certificate programmes. These findings are consistent with those cited in Australia (Wheelahan 2009; Gale et al. 2013; Webb et al. 2017) and England (Thompson 2009). As Wheelahan et al. (2017: 51) note, 'the higher the level of credential within colleges, the less likely students are to come from low socioeconomic backgrounds'.

While college bachelor's degrees could conceivably contribute to greater social equity, the justification for graduate certificate programmes lies primarily in their potential role in helping to create a more highly skilled workforce. As a high proportion of graduate certificate students already have a university degree, an expansion of graduate certificate programming could result in college resources being shifted from serving less economically advantaged students to serving more advantaged students. However, Toor (2020) has shown that many graduate certificate students are foreign students who are unable to obtain the types of jobs for which

they prepared because they lack a Canadian education credential. Completing a postsecondary programme that is of shorter duration and lower cost than a master's degree may help these students obtain a job in which they can realize their potential.

The higher vocational education credentials which likely have the most unequivocally positive implications for equity are the diploma and the certificate. Of the higher vocational education credentials considered in this chapter, these credentials have the highest proportions of students from historically under-served groups. Although certificate programmes have a higher proportion of students from under-served groups than do diploma programmes, the difference between diplomas and certificates in this regard is much less than the difference between diplomas and bachelor's degrees. Although the average earnings premium over high-school graduates is lower for diploma graduates than for university bachelor's degree graduates, there is considerable overlap in the earnings distributions of diploma and degree holders (Frenette and Frank 2016). For example, in 2010, the mean age-adjusted earnings of male graduates in engineering technology exceeded the earnings of male university graduates in agriculture, forestry, communications, journalism, biology, psychology, and several other fields.

Concluding Comments

Of the five credentials awarded by Canadian colleges that could be considered higher vocational education and training qualifications, the two-year diploma is the most prevalent.

College diploma programmes provide an alternative type of higher education for learners who do not find a university suitable to their needs. Two-year diploma programmes likely do more to address inequities in educational opportunity than college bachelor's degrees or graduate certificates, though that conclusion must be regarded as tentative given the limited data for a single province on which it is based. Diploma programmes provide a tertiary education option that is within reach of many secondary school leavers for whom a bachelor's programme may be a step too far. In addition, as the college diploma is under the jurisdiction of the vocational education sector it is less vulnerable to academic drift than the college bachelor's degree. For these reasons, it is likely that the two-year diploma will continue to be the predominant higher vocational education credential in Canada for the foreseeable future. And for the same reasons,

it is a credential that may merit consideration in other countries, including those that have abandoned it in favour of bachelor's degrees.

The most pressing questions concerning higher vocational education in Canada pertain to the future of the college bachelor's degree. Rather than expanding the provision of bachelor's degrees in colleges, in British Columbia and Alberta the colleges that were awarding the most bachelor's degrees have been converted into universities. Though these universities are still offering some sub-baccalaureate programmes, they are also increasing the scale of their Bachelor of Arts programmes. Because of the isomorphic tendencies towards the generalization of higher prestige institutional models in Canada (Harmsen and Tupper 2017), these institutions are more likely to evolve in the direction of the common Canadian university model (Jones 1998) than the European university of applied sciences model.

Colleges in Ontario have a significantly larger role in baccalaureate granting than colleges anywhere else in Canada, but the scale of that activity is still quite low compared to many European countries. Increasing the scale of the college bachelor's degree in Ontario to the point at which colleges account for a significant share of bachelor's degrees is not likely to happen through the approach that the government has taken to date. It will more likely require the government to adopt this as a goal, and develop a strategy to achieve it, which would include removing restrictions on the number of bachelor's degree programmes that colleges may offer and assessing whether the funding presently provided for college bachelor's degree programmes is adequate.

Notes

1. The author was once taken to task by a senior official of CICAN's predecessor organization for using the term 'sub-baccalaureate' in referring to college diploma programmes. The infrequency of use of that term in the college community is perhaps an indicator of tacit acceptance of the parallel conceptualization of the relationship between college diploma and university bachelor's degree programmes.
2. Graduate certificate is the generic term used in the CICAN listing of advanced programmes in colleges (CICAN 2020). The Alberta Credentials Framework includes both a post-diploma certificate and a post-bachelor's certificate (Government of Alberta 2020). The Ontario Qualifications Framework contains only a post-diploma certificate but notes that it can

augment the knowledge and skills of graduates of diploma, advanced diploma, and baccalaureate graduates (Ontario Ministry of Colleges and Universities 2020a).

3. There was a difference between the two surveys in the wording of the question about first-generation status. College students were asked if their parents had attended a college or a university, while university graduates were asked whether their parents had completed a credential in a college or a university.

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