

OECD REVIEWS OF VOCATIONAL
EDUCATION AND TRAINING

A SKILLS BEYOND SCHOOL COMMENTARY ON CANADA

José-Luis Álvarez-Galván, Simon Field,
Małgorzata Kuczera, Pauline Musset,
Hendrickje Catriona Windisch



A Skills Beyond School Commentary on Canada

José-Luis Álvarez-Galván, Simon Field,
Małgorzata Kuczera, Pauline Musset,
Hendrickje Catriona Windisch

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

© OECD 2015

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgement of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.

ACKNOWLEDGEMENTS

The OECD is grateful to the Canadian teams in both Employment and Social Development Canada (ESDC) and the Council of Ministers of Education, Canada (CMEC) for their work in providing information and advice and organising the visits and meetings and preparing the background report. We would also like to thank the other people in Canada who, during our visit and meetings, gave their time to welcome us at their schools and other institutions and answered our questions.

Table of contents

Summary: Strengths and challenges.....	7
The commentary on Canada and its place in the wider OECD study	8
Postsecondary career, technical and professional education in Canada: A snapshot	9
Previous OECD analysis and recommendations	13
Strengths and challenges	14
References	31
Annex A	35

Boxes

Box 1. Skills beyond School: The OECD study of postsecondary vocational education and training	8
Box 2. Sectoral Initiatives Program in Canada	16
Box 3. VET institutional supports for under-represented groups	19
Box 4. Addressing financial barriers to VET in Canada.....	20
Box 5. Main elements of a policy package facilitating transitions between vocational and academic education	26

Summary: Strengths and challenges

In summary, the OECD assessment of the strengths and challenges of the Canadian postsecondary vocational education and training (VET) system is as follows:

Strengths

- Employers are engaged in the system. Apprenticeship is largely industry driven, and industry actively influences college programmes.
- The Canadian apprenticeship system plays a major role in the provision of trade skills. The Red Seal Program underpins the system by ensuring consistent standards and interprovincial mobility.
- The college system provides a wide range of professional skills on campuses spread throughout Canada, allowing most Canadians opportunities to study throughout their lives and gain relevant occupational skills.
- Active steps are taken to address the needs of special groups, including aboriginal people and those with disabilities – while recognising that there is no room for complacency on these fronts.
- Under an innovative programme, applied research is used to further develop links between colleges and employers.
- In general, data are good, and backed by a strong capacity for analysis.

Challenges

- In contrast to some other OECD countries, graduate apprentices have few routes to higher professional trade qualifications, potentially limiting the status of apprenticeships.
- In contrast to some other OECD countries, the strong apprenticeship model is applied only to a relatively limited set of occupations – primarily manufacturing and construction industries.
- The Red Seal apprentice examination is currently a paper and pencil examination for most trades, imposing some limitations. The addition of a practical assessment is now being considered in order to improve the robustness of the exam.

- As in nearly all OECD countries, credit transfer is a challenge. It is a challenge both among colleges, and between colleges and universities.
- Although recognition of prior learning has great promise in principle and is offered widely in the college system, take up has been modest. A similar pattern has been found in many OECD countries.

The commentary on Canada and its place in the wider OECD study

This commentary is one of a series of country reports on postsecondary vocational education and training (VET) in OECD countries, prepared as part of an OECD study (see Box 1). The series includes *reviews*, involving an in-depth analysis of a country system leading to a set of policy recommendations backed by analysis. The *commentaries* are simpler exercises, largely descriptive but also including an assessment of strengths and challenges in the country system. The commentaries are designed to be of value as free-standing reports, but are also prepared so that they can become the first phase of a full review, should a country so wish.

Box 1. Skills beyond School: The OECD study of postsecondary vocational education and training

Increasingly countries look beyond secondary school to more advanced qualifications to provide the skills needed in many of the fastest growing technical and professional jobs in OECD economies. The OECD study, *Skills beyond School*, is addressing the range of policy questions arising, including funding and governance, matching supply and demand, quality assurance and equity and access. The study builds on the success of the previous OECD study of vocational education and training *Learning for Jobs* which examined policy through 17 country reviews and a comparative report. The study also forms part of the horizontal OECD *Skills Strategy* (OECD, 2012b).

Full country policy reviews have been conducted in Austria, Denmark, Egypt, Germany, Israel, Netherlands, Korea, Switzerland, the United Kingdom (England), and the United States (with case studies of Florida, Maryland and Washington State). Shorter exercises leading to an OECD country commentary have been undertaken in Belgium (Flanders), Canada, Iceland, Romania, Spain, Sweden and in Northern Ireland and Scotland in the United Kingdom. Background reports have been prepared in all these countries, and in France and Hungary.

See: www.oecd.org/education/vet

In Canada, the terminology of vocational education and training is not used extensively and other denominations are also commonly found, such as career, technical and professional (CTP). In order to remain consistent with

other OECD reviews and prior agreement with Canadian authorities, the term VET will be used in this report.

This commentary describes the context of the wider OECD study, outlines the main features of the Canadian approach to postsecondary VET and compares its main features with those of other countries. It then provides a brief assessment of the main strengths of the system, and the policy challenges which need to be addressed in Canada.

This commentary was prepared using a standard methodology. The Canadian authorities provided a background report (Federal Department of Employment and Social Development Canada, 2015) following which an OECD team made a visit to Canada on 1-3 October 2012, where the team discussed issues arising with a range of policy makers, stakeholders and staff and students in training institutions.

Postsecondary career, technical and professional education in Canada: A snapshot

Canada is a federation of ten provinces and three territories, each responsible for its own education system. Provincial governments provide on average over 80% of direct public funding to tertiary education institutions (including colleges). While this gives the main lead role on postsecondary VET to the provinces, the government of Canada supports provincial funding through federal transfers and plays a relevant role in other fronts. The federal government provides funding in a number of ways, including through transfer payments to provinces and territories and through direct financial support to colleges and to students. It runs a national student loans programme.¹ In sum, provincial funding is supported by federal transfers. The federal government also has responsibility for the education of Canada's First Nations population living on reserves. Provincial and territorial ministers of education co-ordinate their interests through the Council of Ministers of Education, Canada (CMEC).

In most parts of Canada, there are two main strands of postsecondary vocational education and training – apprenticeships and college programmes. A portion of VET at the postsecondary level takes place in the private career college sector, which does not receive public funding. The primary source of revenue for these institutions is tuition fees, which are considerably higher than in the public sector. In Québec somewhat different arrangements are in place, surrounding the CEGEP institution (see below). Across Canada, in 2009/10, just over 800 000 students were enrolled in either apprenticeships or college career, technical and professional programmes, compared with about 1.2 million students enrolled in

university and general college programmes. The 800 000 enrolments are split roughly equally between apprenticeships and VET programmes (Federal Department of Employment and Social Development Canada, 2015).

Apprenticeships

Apprenticeships are regulated by the provinces and territories, and typically involve industry in determining the standards for training and certification. The government of Canada also plays a role, particularly in ensuring interprovincial mobility.

While most apprentices are registered in construction and industrial occupations, apprenticeships are also available in some service sector occupations such as hairstylists and in early childhood education. 80% of apprentices are in designated Red Seal trades, where a national test allows successful candidates to practice their trade in any province or territory. Apprenticeship programmes normally involve around 80% of the time in the workplace and 20% in off-the-job education – typically organised as an annual block release in a local college. They are typically between two-five years in duration, with off-the-job education from 4-12 weeks a year (Federal Department of Employment and Social Development Canada, 2015). Upon completion apprentices gain a trade qualification. Outcomes from apprenticeship programmes vary across trades with apprentices in the construction sector recording the highest wage premium (13.8%) over high school graduates (Boothby and Drewes, 2010). Overall, according to the National Apprenticeship survey, almost three-quarters of the apprenticeship completers had an annual income higher than the Canadian median annual income (CAD 41 0417) (Ménard et al., 2008).²

In terms of their number, apprenticeships in Canada are significant, but not quite as significant as in some OECD countries. As an indication of scale, the United States has a similar number of apprentices as Canada with a population ten times larger. Conversely Australia has slightly more apprenticeships in a population about 30% smaller. Apprentice enrolments have roughly doubled over the last decade.

Apprenticeships are not formally postsecondary in the sense that high school completion is not usually a condition for entering an apprenticeship. But apprentices without a high school diploma are increasingly rare as more trades require that an apprentice has completed high school. Canadian apprenticeships are therefore treated as at ISCED 4C level.³ But in many practical ways the apprenticeships are postsecondary – most registered apprentices are between 20 and 34 years old – somewhat older on average

than college and university students – and are perceived as employees rather than as students.

While the apprenticeship system is effective in training individuals for the trades, many individuals continue to enter the trade professions through means other than an apprenticeship programme. About 40% of those who earned a Red Seal credential obtained it through the trade qualifier route – demonstrating the breadth of their experience by accumulating and documenting the requisite work hours and passing the Red Seal exam. When challenging the Red Seal exam, 78% of apprentices pass the exam, while 59% of trade qualifiers do (Canadian Council of Directors of Apprenticeship, 2011).

Colleges

Canada's college system provides postsecondary VET programmes in one-year certificate, two-year technical diploma and three-year diploma programmes. Both community colleges and polytechnics offer tertiary-type 5B and non-tertiary postsecondary type 4 programmes (OECD, 2012a). The colleges are intended to meet local labour market needs and are present in a diverse range of geographic locations and communities. While colleges typically grant diplomas and certificates, the number of colleges also offering degrees, including postsecondary tertiary type 5A credentials, is increasing, as is the scope of degrees being offered.

Canada has 131 public and 25 private recognised institutions that offer postsecondary VET programmes.⁴ An additional 35 private institutions are authorised to offer specific postsecondary VET programmes.⁵ Publicly funded universities set their own admissions standards and degree requirements. Provincial and territorial governments have responsibilities in the areas of funding, fees, quality assurance and the introduction of new programmes. In publicly funded colleges, government involvement can extend to admissions policies, programme approval, curricula, institutional planning and working conditions. Most programmes in the colleges are on a first come first served basis. Some programmes have minimum requirements, however these are not generally based on grades. While private colleges are numerous they are estimated to have a combined enrolment of 115 000 students in a given year, compared to 800 000 students enrolled in all postsecondary programmes (Human Resources and Social Development Canada and The Canada Millennium Scholarship Foundation, 2007).

In international comparison, it is clear that Canada's college system plays a larger role in the education and training system than equivalent institutions in most other OECD countries. About half of all adults (aged

25-64) have some form of tertiary education in Canada – one of the highest proportions in the OECD. But half of these, or around one-quarter of adults, have a college degree at tertiary 5B level. This compares with an average of 10% across the whole of the OECD (OECD, 2012a).

The main fields of study in colleges include business, engineering, health and architecture. Labour market returns for college graduates are positive and between 15% and 20% relative to those with just high school diplomas (Boothby and Drewes, 2004). At the same time, around one-third of college graduates continue into further studies (Federal Department of Employment and Social Development Canada, 2015).

Arrangements in Québec

In Québec students finish upper secondary education one year before students in other parts of Canada and then typically enrol in a CEGEP (*collège d'enseignement général et professionnel*). In the CEGEP they can choose between a pre-university programme lasting two years, and a technical training programme lasting three years. Both programmes lead to a diploma granting admission into university (OECD, 2012a:93). Along with CEGEPs, Québec differs from the rest of Canada in that it offers VET instruction through a vocational track at the secondary level (Federal Department of Employment and Social Development Canada, 2015).

Comparing Canada with other countries

Canada, like the United States and the United Kingdom, has a comprehensive high school system with a relatively limited vocational element, contrasting with countries such as Austria, Denmark, Germany, Switzerland and the Netherlands with distinct vocational tracks. In Canada, postsecondary education and training can build on the strength of secondary education. The Programme for International Student Assessment (PISA) of the reading, mathematics and science competencies of 15 year-olds shows that Canada is among the OECD countries with the lowest share of poorly performing students in all three subjects (OECD, 2010b).

Overall, the Canadian adult population (25-64 year-olds) is well educated, with one person in two holding a tertiary qualification, more than in any other OECD country (OECD, 2012c, Table A1.4). Adult educational attainment reflects the education and training system and other factors such as a migration policy that favours skilled and well educated newcomers.

The population of 15-19 year-olds is in decline and is likely to keep falling until 2020.⁶ This suggests that tertiary education graduates will

decline as well, posing challenges for postsecondary attainment rates and the future of the labour market (OECD, 2012a:95).

The Canadian economy has coped well with the global economic crisis. In 2011, 7.5% of Canadian labour force was unemployed (15-64 year olds) while in the Euro zone and the United States the unemployed reached 9%. Very importantly, Canada has one of the highest participation rates in the labour force among the OECD countries despite the economic crisis (OECD, 2013).

Funding in international comparison

Postsecondary VET programmes in Canada are funded through a combination of public subsidy and tuition fees. Students can get help with study costs through various provincial and federal financial aid programmes (grants and loans). The funding system has many parallels with the United States, where the funding for public college education and training comes from the federal level (though federal aid programmes for students), states and students. In some other countries funding arrangements depend on students and provision characteristics. In Denmark, postsecondary VET includes regular full-time programmes mainly for young people and parallel programmes often provided in a part-time mode for adults. They enrol 83% and 17% of VET students respectively. Regular VET is provided by public institutions at no cost to students. Conversely, postsecondary VET for adults relies on public funding and tuition fees paid by participants, fees being set by individual institutions. Public funding of postsecondary VET (qualifications level 3 and 4) in England depends on the level of qualification, the age of the participants and the purpose of studies (first degree or retraining). Programmes for young people (19-24) are either free of charge, or co-funded by the government. Conversely, individuals 24 and older cover the full cost of the provision. To facilitate access of these individuals to education and training the government makes available income contingent loans (graduates do not repay the debt unless their earnings are at or above the threshold level).

Previous OECD analysis and recommendations

In Canada, as in other OECD countries, low earnings are associated with low education and literacy and the participation rates of low-wage workers in adult learning are low (OECD, 2006:123-125). Workplace training is one way of addressing this challenge. The OECD recommends that such programmes should be targeted at vulnerable groups like the aboriginal population, recent immigrants, unattached individuals and lone-parent mothers, alongside low-wage earners (OECD, 2006:125).

The OECD also proposed a review of the existing federal and provincial policies and programmes to tackle skills mismatch and under-qualification, and encouraged the Canadian government to increase the emphasis on the development of tailored programmes for job-seekers, low-wage workers and to improve the education attainment of vulnerable groups (OECD, 2011:139).

The 2012 economic survey (OECD, 2012a) argues that as a consequence of changes in the Canadian economy and labour market, demand for workers with technical skills has increased, encouraging university graduates to complement their degrees with college diplomas to improve their employment potential. This implies a need for a flexible and responsive tertiary education system. In particular, the survey recommends that articulation and credit transfer between tertiary-type A and type B education programmes should be improved (OECD, 2012a:94). It also recommended better access to tertiary education and enhanced distribution of accurate information on the benefits and costs of education and training, to better assist individuals in making their postsecondary choices (OECD, 2012a:103). Fuller details of their recommendations are at Annex A.

Strengths and challenges

Strengths

Employers are engaged in the system

Across OECD countries, policy development in vocational education and training offers particular challenges because of the wide range of different stakeholders involved. The engagement of social partners (employers and unions) is necessary to ensure that the organisation and content of vocational programmes meet the need of employers and the wider economy. Nationally and regionally the involvement of the social partners helps to ensure that the overall design of the system, the content of programmes, and the mix of training provision meet labour market needs. At the national level social partner engagement in policy development is essential if policy is to be successfully implemented, since social partners that buy into policies during their development will be much readier to collaborate in their implementation (OECD, 2010a). Often there is a cultural barrier between the world of industry and the more academic world of public education. Organised social partnerships and strong apprenticeship systems often support high levels of engagement. At postsecondary level, additional challenges emerge because institutions often have high levels of autonomy and distinct missions that may leave local employer requirements somewhat marginal.

In Canada apprenticeship is popular and largely industry driven. Provincial ministries normally require colleges to establish advisory committees for each programme that include employers and other experts who inform college educators about current skill needs. These committees advise on the development of existing programmes, the creation of new programmes and quality assurance. Sector councils (for the whole industrial sector) help to link college programmes to labour market requirements. The new Sectoral Initiatives Program deserves special mention regarding these efforts (Box 2). At the same time, many apprentices have difficulty finding an employer to train them and some challenges remain in encouraging a wider range of employers to participate in the apprenticeship system and, in creating a system that is more responsive to the needs of employers. In 2011, employer participation in apprenticeship was around 19% -- largely unchanged from a 2006 survey which found that employer participation was 17.6%. Only one-half of employers who work in trades with apprenticeship programmes industries were aware of apprentices and apprenticeship training in 2011(Canadian Apprenticeship Forum, 2011).

Box 2. Sectoral Initiatives Program in Canada

A new approach to address skills shortages was announced in 2011 in Canada. The former Sector Council Program's goals were to support the development of a high quality workforce by increasing industry investment in skills; a learning system more responsive to industry's needs; the reduction of barriers to labour mobility; and, enhanced ability of industry to recruit and retain workers. Under the title of Sectoral Initiatives Program (SIP), the refocused approach will result in a new competitive grants and contributions program aiming to support the development of partnership based, industry-driven labour market information (LMI), National Occupational Standards (NOS) and certification programs in sectors of the economy to address current and emerging needs.

The objectives of the new programme are to:

- Support a better match between skills and job market demands.
- Support more informed labour market decisions for job seekers, employers and students through the creation and dissemination of labour market intelligence.
- Support skills development to facilitate labour mobility.

Source: Federal Department of Employment and Social Development Canada (2015), *Skills Beyond School OECD Review of Post-Secondary Vocational Education and Training. Background Report from Canada*, www.oecd.org/edu/skills-beyond-school/Skills_Beyond_School_Country_Background_Report_Canada.pdf

The Canadian apprenticeship system plays a major role in the provision of trade skills

Across OECD countries, apprenticeships provide a powerful structured framework of workplace training augmented by off-the-job education, through which a professional skill is acquired. Apprenticeships are common in many countries but particularly strong systems are found in the Germanophone dual system countries where half or more of young people may enter apprenticeships (OECD, 2010).

The blend of school and workplace learning offered by apprenticeships are very effective at securing smooth initial transitions into the labour market particularly (but not only) where labour markets are relatively regulated. The design is highly variable: on-the-job and off-the-job components are alternated within a week (e.g. Austria, Belgium-Flanders, Germany, Switzerland) or in blocks of several weeks (e.g. Ireland, Canada). In Norway, two years of off-the-job training are followed by two years

on-the-job training. Quintini and Manfredi (2009) looking at transition patterns from school to work across OECD countries, note that in countries with regulated labour markets and strong apprenticeship systems, such as Germany, about 80% of school leavers succeed in rapidly integrating into the labour market.

In Canada, the apprenticeship system is relatively widespread, and actively supported, with growing numbers of adults entering apprenticeships. The Red Seal Program involves longstanding co-operation between the provincial/territorial and federal governments in developing industry defined national standards for workers in the skilled trades. It supports national consistency and mobility across Canada by providing national examinations in 55 trades representing 80% of apprentices, and allowing successful candidates the right to practice their trade in any part of Canada. At the same time the apprenticeship system remains provincially managed, with some differences in design between the provinces, and between different trades. Such flexibility allows for a response to local needs and allows innovations that, if successful, can then be shared across jurisdictions. On the other hand differences in design between provincial apprenticeship models might decrease labour mobility. The Canadian Council of Directors of Apprenticeship is examining ways to develop greater consistency between training systems as a way to reduce potential barriers to apprenticeship completion qualifications (Federal Department of Employment and Social Development Canada, 2015). Labour market outcomes are positive although modest, with wage increments of around 10-20% relative to those without apprenticeship qualifications (Federal Department of Employment and Social Development Canada, 2015). High dropout rates remain a challenge. A Statistics Canada study demonstrates that individuals who complete their programme and become certified have hourly wages that are 25% higher than those who do not complete (Statistics Canada, 2012b).

The college system provides a wide range of professional skills

Across OECD countries a diverse range of postsecondary institutions occupy the space between school and university, and offer one or two year programmes designed to prepare people for technical or professional jobs. These include, for example, community colleges in the United States, TAFEs in Australia, *Fachschulen* in Germany, professional academies in Denmark, professional colleges in Switzerland, polytechnics in Korea, and further education colleges in the United Kingdom. Often the institutions and programmes are quite selective, and this means that they play a limited role in offering second chances to adults who either have weak high school results or are changing careers. The main challenge in offering very open

access is that entrants sometimes lack basic maths and literacy skills, and therefore require extensive remediation programmes, as for example in community colleges in the United States.

In Canada open access colleges provide both further education and second chance opportunities for many younger adults. Strong basic skills at school level (indicated by PISA results) underpin later postsecondary programmes, reducing the need for any remediation. The college system has good geographical coverage (recognising the large size of Canada) allowing most people to study at or near their home or workplace, but is also augmented by distance learning for rural populations. While technical training often requires an on-site presence, some provinces organise delivery on rotating sites. As indicated above, the college system plays a very substantial role in skilling the adult workforce – with about one-quarter of the labour force having a college qualification. While Canada scores well in PISA and in IALS (The International Adult Literacy Survey), there is still an important segment of Canada’s adult population that requires assistance in developing their literacy and numeracy skills. According to the Survey of Adult Skills 22% of Canadians lack basic numeracy skills and 16% perform poorly on literacy. This proportion is higher for sectors of the economy that most often hire VET graduates (Federal Department of Employment and Social Development Canada, 2015).

Active steps are taken to address the needs of special groups

Across OECD countries vocational programmes face a set of distinct equity challenges. Sometimes they are seen as less demanding options than higher status academic routes. Lesser status means that students who might in principle like to pursue vocational programmes avoid them in favour of academic routes – simply for reasons of status. This distorts the choices of students in choosing learning options and employers in selecting recruits. Many countries also look to vocational programmes to help tackle school disengagement – the idea being that less academically oriented adolescents and teenagers can be re-engaged by giving more emphasis to the practical dimensions of learning. This notion lies behind the Spanish VIP programmes – which introduce vocational teaching early on to school pupils deemed at risk (Field, Kis and Kuczera, 2012). To help re-engage adults, the IBEST programme in Washington State in the United States has achieved remarkable results by linking basic academic and vocational skills. *In Canada*, there are specific challenges associated with particular populations. Aboriginal people face profound challenges relevant to the whole domain of public policy – and young aboriginal people are three times less likely to have completed high school than other Canadians. But, within this context, aboriginal people are relatively well-represented in apprenticeship and

college programmes. The government of Canada has invested CAD 1.7 billion over 2010 – 2015 with the aim of improving employability and spends over CAD 200 million annually on supporting provinces in helping disabled people with employability skills. Other federal programmes are designed to address employability of young people and older workers. (See Box 3 below for examples of initiatives targeting disadvantaged populations).

Box 3. VET institutional supports for under-represented groups

Colleges and institutes play a key supporting role in ensuring equitable access to VET programmes through a suite of services, sometimes called wrap-around services, which focus on the multiple challenges disadvantaged and low-skilled learners deal with in a holistic and student-centred way. These services may include literacy, adult basic education and career and academic upgrading programmes. These services are often provided in consideration of other issues that these students may be undergoing such as personal, health, learning or physical disabilities, or financial challenges.

An Association of Canadian Community Colleges (ACCC) survey of member institutions in 2008 indicated that Canadian community colleges and institutes also provided job readiness training, occupation-specific training including occupation specific language training for recent immigrants, workplace essential skills training and career preparation and workplace skills development training. Some colleges and institutes identified integrated programmes which combine upgrading of basic skills and work experiences and job specific skills, or indicated that employment readiness training is integrated into career and technical programmes. Funding for the development and delivery of programmes and services for this client group comes largely from provincial and territorial government programmes, but also from federal government departments such as Department of Employment and Social Development, Citizenship and Immigration Canada and the Department of Aboriginal Affairs and Northern Development Canada.

Not all groups face the same challenges. For some, including older workers, people with disabilities and youth, the issue is getting in or staying in the labour force. For the most part, they are already equipped with skills and experience.

For other groups, the issue is more about skills. Some groups, such as Aboriginal Canadians and recent immigrants are being held back because they do not have sufficient skills to seize new opportunities, or their skills are not being fully utilised. If current performance of these groups persists into the future it will serve to accentuate skills pressures and create gaps in the labour market.

Source: Federal Department of Employment and Social Development Canada (2015), *Skills Beyond School OECD Review of Post-Secondary Vocational Education and Training. Background Report from Canada*, www.oecd.org/edu/skills-beyond-school/Skills_Beyond_School_Country_Background_Report_Canada.pdf

Canada also offers some examples of initiatives to address financial barriers to VET such as the Apprenticeship Grants and the Employment Insurance Program (EI) Part I and Part II (Box 4).

Box 4. Addressing financial barriers to VET in Canada

Canada Apprenticeship Grants and supports

The Government of Canada provides a variety of supports to promote participation in the skilled trades and apprenticeships. The Apprenticeship Grants encourage more Canadians to pursue apprenticeship and become certified tradespersons.

The Apprenticeship Incentive Grant (AIG) is a taxable cash grant, for apprentices who complete the first and/or second level of their apprenticeship programme in a designated Red Seal trade, to a maximum of CAD 2 000.

The Apprenticeship Completion Grant (ACG) is a taxable cash grant of CAD 2 000 for eligible apprentices who successfully complete their apprenticeship training and receive their journeyperson certification in a designated Red Seal trade. To date,⁷ the Government of Canada has provided CAD 418M in apprenticeship grants (339 432 grants issued) to encourage Canadians to become skilled trades people. The grants are complemented by provincial and territorial supports to apprentices who are not registered in a Red Seal trade.

In addition, other Government measures are provided which support the trades, including several income tax measures, such as the Apprenticeship Job Creation Tax Credit, the Tradesperson's Tools Deduction, and the Tuition Tax Credit for trades' examination fees.

Employment Insurance (EI) Program

Part I of the EI program provides temporary financial assistance to workers who have lost their job through no fault of their own while they look for work or upgrade their skills. EI Part I also provides assistance to workers who are sick, pregnant, or caring for a newborn or adopted child, as well as those caring for a family member who is gravely ill with a significant risk of death.

The purpose of Part II of the Employment Insurance Act is "to help maintain a sustainable EI system through the establishment of employment benefits for insured participants and the maintenance of a national employment service." The programmes delivered under Part II of the Employment Insurance Act are called Employment Benefits and Support Measures (EBSMs). EBSMs are labour market programmes and services established to assist individuals in Canada to prepare for, obtain and maintain employment. They are delivered mostly by provinces and territories through Labour Market Development Agreements (LMDAs).

Box 4. Addressing financial barriers to VET in Canada (*continued*)

Apprentices can receive support from Parts I and II of the EI program. Apprentices can receive EI Part I income support during periods of in-school training and Provinces and Territories could decide to assist EI eligible apprentices with tuition and other education related costs through EI Part II. In 2010-11, 38 380 claims for apprenticeship were established under EI part I, with a total of CAD 172M in income benefits paid to apprenticeship claimants and the average duration of apprenticeship claim was 10.5 weeks compared with 21.5 weeks for non-apprenticeship claims.

Source: Federal Department of Employment and Social Development Canada (2015), *Skills Beyond School OECD Review of Post-Secondary Vocational Education and Training. Background Report from Canada*, www.oecd.org/edu/skills-beyond-school/Skills_Beyond_School_Country_Background_Report_Canada.pdf

In every case these programmes support different forms of postsecondary VET. While many challenges certainly remain, the evidence is that Canada has identified many of the main equity challenges and is seeking to address them.

Applied research is used to further develop links between colleges and employers

Across OECD countries issues arise about the role of applied research in institutions where the primary mission is to provide postsecondary vocational training. Such research, if handled carefully, can provide an effective link with local employers, since the research projects aim to help employers with their products and services. Conversely there is a risk that excessive academic interest in research could distort the mission of postsecondary institutions through a process of academic drift (for a discussion of this issue in Denmark, see Field et. al., 2012).

In Canada a new federal funding initiative seeks to use the geographical spread and industry links of colleges creatively by funding applied research projects in colleges that address the innovation needs of local employers. College students often build their skills by participating in these projects, and colleges often enrich their teaching with the applied research results.

Data are good, and backed by the capacity for analysis

Across OECD countries, the development of VET policy depends on good data, alongside the analytic and research capacity to make use of those

data and conduct evaluations of policy and policy reform. As a means of addressing this issue many countries have created dedicated research centres, whose function is to conduct analysis on VET issues. Thus, Australia has developed the National Centre for Vocational Education Research (NCVER), Germany has the Federal Institute for Vocational Education and Training (BIBB - *Bundesinstitute für Berufsbildung*), and in Korea the Korea Research Institute for Vocational Education and Training (KRIVET).

In Canada data are generally good with extensive data available through Statistics Canada in particular. The Registered Apprenticeship Information System (RAIS) is the foremost source of national, comparable data on apprenticeship in Canada, based on data collected by provinces and territories and provided to Statistics Canada (Statistics Canada, 2015). A strong network of university and other research institutions provide the potential and capacity for policy analysis and research. As just one example, Canada's extensive participation in PIAAC (Programme for the International Assessment of Adult Competencies of the OECD) shows Canada's use and development of data (OECD, 2011:313).

Challenges

Tackling dropout in apprenticeship

Across OECD countries, dropout rates for apprentices differ markedly. Often apprentices drop out because they do not like the work or decide to pursue a different career. Others, particularly in economic good times, or in booming sectors of the economy, may drop out of apprenticeship because they can get good wages with the skills they have already acquired (in Australia, like Canada, a very dynamic natural resources sector sometimes leads to apprenticeship dropout). The background report for Canada quotes discontinuance rates of around 50% (Desjardins and Paquin, 2010). However, many of those who do discontinue their apprenticeship programme continue to work in the trades.

Ensuring that qualified apprentices have opportunities for further upskilling

In some OECD countries upper secondary vocational tracks can be dead ends, with constricted opportunities for further upskilling. When students choose among different vocational and academic tracks future upskilling opportunities influence their decision (Ordovensky, 1995; Dunkel and Le Mouillour, 2009). So countries face the challenge of ensuring that graduates of the initial vocational programmes system have access to further learning

opportunities. Such opportunities are desirable because growing technological complexity is increasing the demand for higher level skills, because students themselves are aspiring to higher level qualifications and because the absence of such opportunities tends to leave initial VET pathways as low status dead ends. In different countries graduates of upper secondary vocational programmes often pursue two sorts of upskilling – first higher level or more specialised professional training, such as the master craftsman qualifications often offered to qualified apprentices and linked to the ability to run a small business and manage staff; second, more academic qualifications at bachelors or master level that may open up different or wider career opportunities. In addition, it should be noted that initial pathways for youth to enter the trades are also an area of concern.

While it is not realistic or desirable to imagine that a large proportion of initial VET graduates will enter academic tertiary education, the steady increase in the level of skills required in modern labour markets imply that efforts should be made to open up tertiary institutions to the greatest extent possible. In Germany, access to university for students without the normal higher education access qualification was substantially opened up in 2009.⁸ Switzerland has been relatively successful at opening *Fachhochschulen* to graduates from the dual system through the creation of a specific vocational matriculation examination (the *Berufsmaturität*), to be completed in parallel to the VET track and that provides access to tertiary education. Today, around 12% of all VET graduates obtain the *Berufsmaturität* and they represent half of the students in the Universities of Applied Science (Hoeckel, Field and Grubb, 2009). Austria, similarly, introduced the *Lehre mit Matura* in 2008. In Denmark, throughout 2005-2007, 8-11% of graduates from academy professional programmes started an academic higher education degree within 27 months (Danish Agency for Higher Education and Educational Support, 2012).

In Canada “journeypersons” (graduate apprentices) have limited routes for upskilling. They may seek entry to college or university programmes, but the option of higher level professional examinations within their own trade, on the model of some European countries does not seem to be generally available. This could be a factor holding back the status of apprenticeships and may contribute to the difficulty of encouraging apprenticeships in a wider range of occupations, discussed below. Nonetheless, it should be noted the preliminary progress made on this point by Blue Seal programmes in Alberta, a growing number of opportunities for vocational college graduates in Québec, and the polytechnic’s model of a ladder of credentials (Federal Department of Employment and Social Development Canada, 2015).

Enhancing the occupational range of apprenticeships

In most OECD countries, apprenticeships tend to be concentrated in particular economic sectors, particularly in the trade and craft professions associated with the construction industry. But in some OECD countries apprenticeships are used not only in the traditional trades, but also in sectors such as public administration, tourism and banking. Apprenticeships are also increasingly used to train for technical areas, such as laboratory and hospital technicians. In Norway for example, apprentices are found in public administration. In Switzerland, a new IT engineer occupation was designated in the 1990s with an associated apprenticeship. In Germany the powerful structures of the dual apprenticeship system have been applied successfully to higher level technical trades which would involve tertiary education in other countries (Hoeckel and Schwartz, 2010).

In Canada apprenticeship is currently provided in occupations mostly (but not entirely) related to trades and construction. In international comparison apprenticeship in Canada is offered in fewer occupations than in some other countries with strong apprenticeship system. While this position finds parallels in a number of OECD countries, some, as indicated above, have succeeded in introducing the apprenticeship model more widely. Canadian provincial governments have sought to extend apprenticeships to other areas but have sometimes run into obstacles: apprenticeship is not always seen as being appropriate in status terms for white collar professionals, and guidance counsellors in schools do not necessarily understand the value of apprenticeships or the workplace. Given the power of apprenticeships as a learning framework there are opportunities here for Canada to grasp.

Augmenting the Red Seal examination with practical assessments

In Canada the Red Seal interprovincial examination is currently a multiple choice paper and pencil examination for most trades. While the examination is an addition to, rather than a replacement for, the provincially determined examinations for apprentices it does contrast with the practical assessments of vocational skills which are used in many other countries. While practical assessment is difficult and resource-intensive it is also a valuable adjunct to paper and pencil tests, as it extends the range of competencies under assessment. In this regard, some work is already under way in Canada designed to improve accessibility to Red Seal certification, in particular for skilled tradespeople who have acquired their skills and knowledge outside of a formal Canadian apprenticeship experience, and to generate innovative approaches for verifying the acquisition of skills.

Currently measures are introduced to enhance the occupational standards model. The “new” standard will allow for the generation of common learning tools such as training guides and learning standards which will contribute to harmonising apprenticeship training requirements (both on-the-job and in-school technical training). Assessment approaches, such as practical tests, are also explored. This work is expected to contribute to harmonising training procedures and enhancing certification requirements across jurisdictions.

Facilitating transition and credit transfer

In many OECD countries graduates of lower level postsecondary programmes (such as one or two-year programmes) face obstacles in entering higher level programmes (such as three to four-year bachelor programmes in universities) and ensuring that the learning outcomes from the lower level are recognised through access and course exemptions. The effect can be multiple inefficiencies – for the student because they have problems with access or have to repeat course material, for funding bodies that pay for such repetition and for institutions that often have to laboriously negotiate articulation agreements on a programme by programme and institution by institution basis. As an indicator of the potential workload, the US state of Washington reports having more than 4 000 separate articulation agreements.

The main potential solutions pursued by countries are first, measures to improve transparency in course content so that overlaps can be rapidly identified and addressed through better access arrangements, course exemptions, and second, co-ordination mechanisms to try to facilitate articulation and encourage the adaptation of curricula to ensure that they are articulated with one another. For example, in the US state of Florida a course numbering system is used systematically to identify overlapping course content that would lead to a course exemption. These challenges have been an issue in a range of OECD countries reviewed in the course of the *Skills beyond School* exercise including Austria, Canada, Germany, Israel and the United States. Some general principles are set out in Box 5.

Box 5. Main elements of a policy package facilitating transitions between vocational and academic education

OECD countries employ a range of policies to facilitate transitions from postsecondary VET into academic higher education. These policies often reinforce each other. The main policies across OECD are:

1. *Creating the opportunity*: Allowing postsecondary VET graduates to enter academic higher education without obtaining any of the traditional entry qualifications such as an academic upper secondary qualification is the precursor for widening access. VET graduates are often granted study-field specific entry based on their work experience, vocational qualification, demonstration of skills or any combination of these (Orr et al., 2011). A key policy choice is whether to make entry automatic or leave some discretion in academic higher education institutions.
2. *Making opportunities known*: Transition from postsecondary VET to academic higher education typically involves moving between segments of an increasingly complex education system with very different institutions, rules, and expectations (OECD, 2010a). Good quality career guidance is necessary to make VET graduates aware of their opportunities and the associated requirements. Countries often employ targeted career guidance schemes for VET graduates.
3. *Supporting transitions*: Postsecondary VET graduates naturally tend to be stronger in practical subjects but sometimes weaker in academic subjects than their counterparts from general education. They will therefore often require additional support at the outset of their academic studies. Preparatory courses before entering academic higher education (e.g. as additional courses in vocational schools) or targeted remedial courses at the beginning of academic studies are common (Musset et al., 2013).
4. *Lowering study costs and recognising prior learning*: Entrants often dispose of vocational skills and knowledge which overlap with courses of academic studies. Granting exemptions for courses whose content they already know can shorten study time, and overall study costs. In general, countries can choose to intervene in the course exemption decisions of academic higher education institutions in three ways: *i*) increasing transparency by mapping course content using a modular approach both on the VET and academic sides and making learning outcomes comparable; *ii*) based on a transparent course comparison map, obliging academic higher education institutes to grant automatic access to equivalent courses; and *iii*) ensuring a course harmonisation programme across VET and academic training providers.

Box 5. Main elements of a policy package facilitating transitions between vocational and academic education (*continued*)

5. *Meeting atypical student demand:* Students entering academic higher education through the VET route often have substantial work experience so the opportunity cost of studies is high for them. Therefore, education provision which allows studies and work to be combined is essential. In many OECD countries, most academic higher education institutions offer courses in the traditional full-time format; encouraging part-time, modular and distance learning options is important.
6. *Setting institutional incentives right:* In many OECD countries, academic higher education institutions are financed according to a formula which rewards institutions according to the length of student studies is discouraging them from offering course exemptions. Countries can fund academic higher education institutions at least partially based on completions rather than the length of time spent at the institution.

In Canada is common with other OECD countries, credit transfer is recognised as a challenge. It is a challenge both among colleges, and between colleges and universities. Evidence suggests that about 20% of college and university students in Canada leave their studies by the fourth year of their programme, but more than half of them return within the following four years, of which between 30% to 50% change their tertiary education institution (OECD, 2012a:94). Some provinces built credit transfer programmes at the provincial level, and these could be built on through a process of peer learning between provinces over what works in credit transfer, as well as drawing on international experience. The signing by college and university leaders of a Framework for Collaboration in September 2014 to guide work towards improving credit transfer and pathways among postsecondary presents a promising initiative to address the issue of credit transfer.

Making the most of recognition of prior learning (RPL)

Recognition of prior learning is a key component in many OECD countries' systems for upskilling their labour force, making competences (often acquired informally) more transparent to employers, students, and education institutions (Field et al., 2012). It has numerous potential benefits: first, through course exemptions it reduces the direct and opportunity costs of formal learning; second, it improves the efficiency of the labour market, by making acquired skills transparent; third, it helps adults with limited formal education to re-enter education and advance their careers; and fourth it rewards and therefore encourages learning in informal settings. A major

longitudinal study undertaken in the United States showed that the use of RPL was associated with a higher chance of graduation and reduced study time (CAEL, 2010). At the same time there are many barriers to its effective use. Teaching professionals are often unwilling to accept that competences that they are responsible for delivering can also be acquired informally, and employers are sometimes reluctant to make the skills of their own employees too transparent for fear of poaching by competing firms. Education institutions sometimes have inadequate financial incentives to recognise prior learning. Assessing prior learning is also a significant challenge since informal learning is almost by definition undocumented. Credible and professional assessment of informally acquired skills is itself a demanding and time-consuming task.

Many OECD countries also offer a range of professional examinations, established by an industry or a profession, for those wishing to gain a formal qualification in their field. As these exams are often outcome oriented and competency-based without any coursework requirement, they can be an effective means of recognising prior learning.

In Canada recognition of prior learning is offered widely in the college system and supported by government at all levels, but take up has been relatively modest. Further work may be necessary to fully identify the obstacles to better use of this model and how those obstacles may be overcome. In Canada RPL also, at least potentially, could play a very important role in the integration of new immigrants into the labour market.

Notes

1. Québec, Nunavut and Northwest Territories do not participate in the Student Financial Assistance Program. While these jurisdictions do not participate in the Canada Student Loans Program, they do receive equivalent funding from the federal government for their provincially run programme.
2. Income data comes from census self-reporting, which could lead to an under-reporting of income due to the cash transaction nature of the industry.
3. There are discussions in Canada about reclassifying apprenticeship programmes in light of the implementation of the new ISCED 2011.
4. Recognised postsecondary institutions are “private or public institution[s] that [have] been given the authority to grant degrees, diplomas, and other credentials by a *public or private* act of the provincial/territorial legislature or through a government-mandated quality assurance mechanism.” CICIC Directory of Universities, Colleges and Schools in the Provinces and Territories of Canada. Definitions. Available at: www.cicic.ca/507/definitions.canada
5. Postsecondary institutions authorised to offer specific credentials are “private or public institution[s] that [have] been given the authority to grant specific degrees, diplomas or other credentials through a government-mandated quality assurance mechanism, and/or by a private act of the provincial territorial legislature.” Unlike recognised institutions, these private institutions are only authorised to grant specific credentials. CICIC Directory of Universities, Colleges and Schools in the Provinces and Territories of Canada. Definitions. Available at: www.cicic.ca/507/definitions.canada
6. This information is based in projections by Statistics Canada and can be found at: Statistics Canada Medium Growth Scenario, CANSIM Table 052-0005. www5.statcan.gc.ca/cansim/a26?lang=eng&id=520005
7. As of 15 July 2012.
8. New regulation permits those who pass an advanced vocational examination (e.g. *Meister*) a general entrance to academic higher education and holders of vocational qualifications without such qualification a subject-specific higher education entrance qualification.

References

- Boothby, D. and T. Drewes (2010), “Returns to apprenticeship in Canada”, *Working Paper No. 70*, Canadian Labour Market and Skills Researcher Network,
www.clsrn.econ.ubc.ca/workingpapers/CLSRN%20Working%20Paper%20no.%2070%20-%20Boothby%20and%20Drewes.pdf
- Boothby, D. and T. Drewes (2004), “Post-secondary education in Canada: returns to university, college and trades education”, presentation at the Canadian Economics Association meetings, Toronto.
- CAEL (2010), *Fueling the Race to Postsecondary Success: A 48-institution Study of Prior Learning Assessment and Adult Student Outcomes*, CAEL, Washington, DC.
- Canadian Apprenticeship Forum (2011), *Employers and Apprenticeship in Canada*, Ottawa, June 2011,
www.nald.ca/library/research/caf/employers_apprentice/employers_apprentice.pdf
- Canadian Council of Directors of Apprenticeship (2011), *Red Seal: The Interprovincial Standards Red Seal Program. Annual Report 2011*,
www.red-seal.ca/others/2011report@-eng.jsp
- Danish Agency for Higher Education and Educational Support (2012), *Skills beyond School: OECD Review of Post-Secondary Vocational Education and Training – National Background Report for Denmark*,
<http://ufm.dk/en/publications/2012/oecd-review-skills-beyond-school-2013-national-background-report-for-denmark>
- Desjardins L. and N. Paquin (2010), “Registered Apprentices: The Cohorts of 1994 and 1995, One Decade Later”, Statistics Canada, Ottawa.
- Dunkel, T. and I. Le Mouillour (2009), “Through the looking-glass: diversification and differentiation in vocational education and training and higher education”, in CEDEFOP, *Modernising Vocational Education and Training. Fourth Report on Vocational Training Research in Europe: Background Report, Volume 2*, CEDEFOP, Luxembourg.

- Federal Department of Employment and Social Development Canada (2015), *Skills Beyond School OECD Review of Post-Secondary Vocational Education and Training. Background Report from Canada*, www.oecd.org/edu/skills-beyond-school/Skills_Beyond_School_Country_Background_Report_Canada.pdf
- Field, S., V. Kis, and M. Kuczera (2012), *A Skills beyond School Commentary on Spain*, OECD Reviews of Vocational Education and Training, www.oecd.org/edu/skills-beyond-school/OECD%20Reviews%20of%20Vocational%20Education%20and%20Training%20-%20A%20Skills%20Beyond%20School%20Commentary%20on%20Spain.pdf
- Field, S., et al. (2012), *A Skills beyond School Review of Denmark*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264173668-en>
- Hoeckel, K. and R. Schwartz (2010), *A Learning for Jobs Review of Germany 2010*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264113800-en>
- Hoeckel, K., S. Field and W. Grubb (2009), *A Learning for Jobs Review of Switzerland 2009*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264113985-en>
- Human Resources and Social Development Canada and The Canada Millennium Scholarship Foundation, (2007), *Survey of Canadian Career College Students. Phase I: Institutional Survey*.
- Ménard, M., F., et al. (2008), *Canada Overview Report: National Apprenticeship Survey*, Statistics Canada.
- Musset, P., et al. (2013), *A Skills beyond School Review of Austria*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264200418-en>
- OECD (2013), “Short-Term Labour Market Statistics”, *OECD.Stat* (database), <http://stats.oecd.org/Index.aspx?DataSetCode=STLABOUR> (accessed on 12 March 2013).
- OECD (2012a), *OECD Economic Surveys: Canada 2012*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/eco_surveys-can-2012-en

- OECD (2012b), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264177338-en>
- OECD (2012c), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/eag-2012-en>
- OECD (2011), *Education at a Glance 2011: OECD Indicators*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/eag-2011-en>
- OECD (2010a), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264087460-en>
- OECD (2010b), *PISA 2009 Results: Learning Trends: Changes in Student Performance Since 2000 (Volume V)*, PISA, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264091580-en>
- OECD (2006), *OECD Economic Surveys: Canada 2006*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/eco_surveys-can-2006-en
- Ordovensky, F. (1995), “Effects of institutional attributes on enrolment choice: implications for postsecondary vocational education”, *Economics of Education Review*, Vol. 14, pp. 335–50.
- Orr, D. et al. (2011), *Social and Economic Conditions of Student Life in Europe, Synopsis of Indicators, Final Report*, Eurostudent IV 2008-2011.
- Quintini, G. and T. Manfredi (2009), “Going Separate Ways? School-to-Work Transitions in the United States and Europe”, *OECD Social, Employment and Migration Working Papers*, No. 90, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/221717700447>
- Statistics Canada (2012a), Statistics Canada website, www.statcan.gc.ca (accessed July 2013).
- Statistics Canada (2012b), “Study: certification, completion, and the wages of registered apprentices, 2007”, www.statcan.gc.ca/daily-quotidien/121003/dq121003a-eng.pdf, (accessed 15 July 2015).
- Statistics Canada (2015), “Registered apprenticeship information system (RAIS)”, www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3154&Item_Id=81735&lang=en, (accessed 15 July 2015).

Annex A

Policy recommendations from OECD (2012a), “Tertiary education: Developing skills for innovation and long-term growth” in *OECD Economic Surveys: Canada 2012*, OECD Publishing, Paris.

DOI: http://dx.doi.org/10.1787/eco_surveys-can-2012-en

Improve access for disadvantaged and under-represented groups

- Increase targeted need-based financial assistance, which may be funded through reduced education tax credits where public finances are constrained. Consider moving fully to an income-contingent student loan repayment system if high initial costs are not prohibitive. Re-evaluate student aid limits to ensure they realistically address the costs faced by students, in particular those with dependents. Reduce barriers for debt-averse financially disadvantaged students by changing the aid application process to separate loans from grants. Consider greater targeting of financial assistance programmes on students with no family history of higher education. Further, reduce barriers for risk- and debt-averse students by providing relevant and reliable information to support their learning and career choices.

Enhance responsiveness of the tertiary system to changing student and labour market needs

- Attract a greater share of foreign students in the tertiary education system, and expand opportunities for them to work and obtain permanent residency after graduation.
- Promote a more flexible delivery model of higher education to encourage skills upgrading through continued efforts to strengthen credit-transfer arrangements across tertiary education institutions (TEIs) (both within provinces and between them), and greater integration and recognition of online and distance learning resources as well as apprenticeship training.

Align institutional incentives with policy priorities

- In provinces with constrained public finances, evaluate whether tuition policies undermine institutional quality and competitiveness. Consider using fee differentiation by programme or allowing tuition levels to evolve in step with increases in household income or an appropriate education cost index.
- Consider implementing, according to the particular needs and priorities of each province or territory, greater differentiation between institutions that engage in research and those that focus primarily on teaching so as to promote greater quality and efficiency based on comparative advantage.
- Allocate more funding to Statistics Canada to co-ordinate data collection on TEIs and student outcomes at a nation-wide level. Undertake efforts to develop a better set of indicators upon which to base performance funding to institutions. Use a value-added approach to select indicators more closely linked to institutions' impact on student learning. Use public funding to reward tertiary institutions based on student placements in co-op or internship posts and the number of students assisted by career-guidance services.
- To strengthen the development of innovation skills, use review processes within provincial quality-assurance frameworks to ensure that: *i*) programmes in science, technology, engineering and mathematics fully integrate elements of communication, business and entrepreneurial training; and *ii*) student-assessment practices evaluate students on higher-order thinking skills and not just knowledge of content.

OECD REVIEWS OF VOCATIONAL EDUCATION AND TRAINING

A SKILLS BEYOND SCHOOL COMMENTARY ON CANADA

