



WORK AND LEARNING

Knowledge Centre



Pathways for Youth to the Labour Market: An Overview of High School Initiatives

by

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This report, sponsored by the Work and Learning Knowledge Centre (WLKC), has been prepared by

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as part of the Canadian Policy Research Networks (CPRN) project, *Pathways for Youth to the Labour Market*.

The opinions and conclusions expressed in the document are those of the author and do not necessarily reflect the views of WLKC members.

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Foreword

Young Canadians are looking for more choice when it comes to learning options – before and during their careers. That was a strong message coming out of CPRN’s Youth Dialogue in November 2005. These young people told us that some form of post-secondary education should be available to everyone – whether it is university, college, trades programs or experiential learning. They told us there should be a variety of well supported learning opportunities.

CPRN is in the middle of a two year project to examine the ways young people navigate from high school through to the labour market. The goal is to identify what supports or hinders youth’s ability to find pathways that lead to good jobs, and to examine attitudes and underlying values about the different pathways.

This report, by Alison Taylor of the University of Alberta, is the third in our series on *Pathways for Youth to the Labour Market*. It examines institutional and policy structures that affect the ability of high school students to find learning and career pathways that lead to success in the labour market. Taylor looks at four Canadian provinces (British Columbia, Alberta, Ontario, and Newfoundland/Labrador) as well as the State of Queensland in Australia.

Taylor finds that all four of the provincial governments studied are interested in creating more career pathways for students and enhancing flexibility and mobility in learning systems. However, to date, these initiatives are available only to a small number of high school students. The author also finds evidence of lack of sustainability of initiatives and potential inequities and inconsistencies in opportunities and outcomes for students. The report calls for more attention to links among vocational education in high schools, apprenticeship programs, and tertiary education.

I would like to thank Alison Taylor for her important contribution to our *Pathways* project. I would also like to thank the Work and Learning Knowledge Centre of the Canadian Council on Learning for their financial support for this research.

Sharon Manson Singer, Ph.D.
April 2007

Executive Summary

The transition from education to working life has become a focus for policy makers across most OECD countries in recent years. A study of transition systems across 14 OECD countries (OECD, 2000) suggested that effective transition systems are characterized by well organized pathways that connect initial education with work and further study and widespread opportunities to combine workplace experience with education. They provide good information and guidance and tightly knit safety nets for those at risk. In Canada, writers suggest that while examples of successful vocational programs exist in most parts of Canada, more attention is needed. A more effective Canadian system would require strong political leadership, a focus on curriculum, improved counselling, addressing the attitudes and expectations of parents and students, and engaging business and labour communities (de Broucker, 2005).

The CPRN “*Pathways*” research project is designed to profile the range of school-to-work pathways taken by Canadian youth and to identify factors associated with more successful transitions into rewarding employment. This report identifies institutional and policy structures that appear to support or hinder the ability of young people to find pathways leading to rewarding work in four provinces across Canada: British Columbia, Alberta, Ontario, and Newfoundland/Labrador. Information from Australia and the State of Queensland is also included for comparative purposes.

The key questions addressed in this report are:

- How have approaches and roles of different groups involved in school-to-work transition within secondary schools changed over time?
- To what extent is preparation for skilled work available in secondary schools?
- What initiatives/programs are available for youth not bound for college or university and what proportion of youth are engaged in these?
- To what extent do provincial policies aim to help students identify feasible and rewarding career pathways and allow mobility between programs/pathways?

British Columbia

Curriculum: As in most provinces, BC students take core courses (e.g., English, Math, Science) that place them on pathways toward university, college, or the workplace. However, streaming occurs on a course-by-course basis rather than by program and so students may take different levels of courses. In an attempt to make curriculum more relevant to future education and work, the BC Ministry of Education introduced Applied Academics courses in 1997; however, there was resistance from universities, and the number of students taking these courses is small. Interested students also have opportunities to take optional technology courses and work experience courses to gain skills and experience related to particular occupational areas. A career education course, Planning 10 is required for graduation as is the completion of a Graduation Portfolio, aimed at encouraging students to engage in career and life planning.

Career Programs: Provincial policy-makers are interested in better articulating high school programs with post-secondary education and training through secondary school apprenticeship, Accelerated Credit Enrolment in Industry Training, and cooperative education. Just over 4 percent of grade 9 to 12 students participated in career programs in 2004/05. The Ministry of Education has provided funding and set targets to increase enrolments. Career and Technical Centres encourage such articulation and students can earn dual credit for high school and post-secondary courses.

Links to PSE: The college transfer system in BC has played an important role in increasing PSE enrolments and providing mobility within the system.

Alberta

Curriculum: Students take core courses that direct them towards university, college, or the workplace. Courses that are part of the Integrated Occupational Program (now called Knowledge and Employability courses) lead to a Certificate of Achievement, which requires fewer credits than a high school diploma. All secondary school students are required to take the Career and Life Management course, which includes a component related to career planning. They may also take optional Career and Technology Studies courses, which are currently being restructured to link more closely to National Occupational Classification codes. These courses are modular and account for approximately 14 percent of the total high school credits granted in the province.

Career Programs: The Registered Apprenticeship Program is offered by school districts across the province to high school students and the number of participants has increased since its introduction in 1991. Students are able to earn hours toward an apprenticeship certification and high school diploma, although they generally enrol in the in-class apprenticeship training after high school. Students in participating school districts can also enrol in Career Prep – a program that combines school and work-based learning and promotes articulation between high school and college curriculum. These programs enrol less than 5 percent of secondary students.

Links to PSE: Like BC, Alberta has a college transfer system which promotes mobility for young people between secondary schools, colleges, and universities in the province. However, technical institutes do not offer formal university transfer programs.

Ontario

Curriculum: In 1999, Ontario reduced the secondary school program from five to four years so the program now includes grades 9 to 12. Along with this change, the introduction of new high school curriculum in the same year has raised concerns about a drop in high school completion rates. New grade 11 and 12 core curriculum directs students toward work, college, and university destinations. Students are now also required to pass a literacy test (usually taken in grade 10) and to complete 40 hours of community involvement to graduate. Interested students can take optional Technological Education courses and Cooperative education courses to learn work-related skills. As in other provinces, technology course offerings vary across schools and districts, and schools have difficulty finding qualified teachers. Credits in these courses

represented approximately 9 percent of all high school credits in 2004/05. Cooperative education is more popular with almost 17 percent of high school students participating in 2004.

Career Programs: The province has placed increasing emphasis on providing clearer articulation of routes from school to college, for example, through the School/College/Work Initiative (SCWI), which may involve dual credit and dual programs in some sites. More recently, it has introduced High Skills Majors to allow students to bundle course in particular occupational areas and to earn external credits and industry certification. The Ontario Youth Apprenticeship Program allows students to begin apprenticeship training while earning a high school diploma.

Links to PSE: Concerns have been raised about the province's "ad hoc" approach to transfer. However, initiatives like the School/College/Work Initiative and High Skills Majors promote partnerships between schools and post-secondary institutions to provide more coherent pathways for students.

Newfoundland/Labrador

Curriculum: Students select different levels of core courses in high school leading to work, college, or university. The Ministry of Education recently introduced new technology education courses and has provided funding to revitalize school equipment and facilities. Enrolments in technology courses represented approximately 7 percent of all senior high school courses in 2005/06. Interested students can participate in co-operative education courses although the number of students participating has declined with cuts to funding. Students are required to take a career development course as part of their graduation requirements starting in 2005. They are also required to develop an employability skills portfolio and to complete a 30 hour community contribution component (similar to Ontario and BC).

Career programs: Partnership initiatives appear to be more local than provincial. For example, a Community Career Centre operated between 2000 and 2003 in St. John's, and Student Transition to Educational Programs (STEP) were developed to link high school students to apprenticeship training and PSE programs at Memorial University and the College of the North Atlantic. There is provincial interest in formalizing a high school apprenticeship program in the future. It is apparent that here, as in other provinces, initiatives depend on the sustainability and adequacy of resources.

Links to PSE: As in other jurisdictions, steps have been taken to increase mobility and transferability of credits across educational institutions.

Appendix 2 summarizes key provincial initiatives discussed in this report.

Australia

Like Canada, education is not a federal responsibility in Australia and systems of education and employment are described as "loosely connected." Also like Canada, growing interest in vocational education and training (VET) in schools is attributed to concerns about the employability of school leavers and the perceived need to increase skill levels across the

population. Unlike Canada, VET in Australian schools is more closely linked to a national system of qualifications, the learning system for young people aged 15 to 17 is not confined to secondary schools, and the federal government seems to have played a larger coordinating role in terms of VET in schools in recent years.

In the State of Queensland, over half of senior secondary students participated in VET in schools between 2000 and 2003. School based apprenticeships and traineeships in a wide range of occupational and industry areas are available. Since 2006, Queensland also requires that all youth between the ages of 15 to 17 be involved in some type of educational or training program which provide credits toward an education certificate. Funding appears to be available for VET in schools at State and Federal levels and schools are required to report on outcomes.

Trends Across Canada and Policy Issues

The following trends are apparent in provincial policies related to providing career education and preparing young people for transitions to PSE and work:

- All four provinces have placed increased emphasis on career planning in high school as part of the secondary school program. Some require that students prepare an employability skills or career portfolio.
- Three of four provinces have mandated that secondary students participate in some form of community involvement for a set number of hours as part of their high school graduation requirements (BC, Ontario, and Newfoundland).
- Three of four provinces have established a high school apprenticeship program (BC, Alberta, and Ontario). A small proportion of the high school population participates and the majority of this group is male.
- All provinces emphasize the need for local partnerships between schools, post-secondary institutions, and employers. A couple (Ontario and Alberta) have supported the development of provincial “brokers” to promote partnerships.
- All provinces have promoted a decentralized “market” approach to vocational education and training with varying degrees of intervention in coordinating institutional arrangements. There has been little federal involvement in recent years.
- All provincial governments are interested in increasing the career pathways for students and enhancing flexibility and mobility in learning systems. Some have gone further than others (e.g., BC and Ontario) in providing opportunities for high school students to earn post-secondary credits and/or industry certification. To date, these initiatives involve a small proportion of the high school population.
- All provinces are struggling with the need to constantly update technology curriculum and facilities and to hire qualified teachers.
- Few provinces collect information about program outcomes, and enrolment information is not readily available or easily comparable across jurisdictions.

The following questions require further discussion:

- What role should federal and provincial governments play in terms of partnership facilitation, support/funding, and coordination of high school initiatives? To what extent should initiatives be driven locally?
- Which group/s should be accountable for the effectiveness of student transitions to further education and work? How should school-based programs be evaluated?
- What roles should post-secondary institutions and industry play and how can they be encouraged to participate?
- How can students be encouraged to make realistic career decisions without prematurely streaming them or locking them into particular educational and occupational choices? How can governments ensure that initiatives are accessible and equitable?
- How can we ensure that credentials and certifications provided in formal education have currency in the labour market?

The analysis in this report provides some tentative responses to these questions. It is clear that governments are key players in ensuring the sustainability and effectiveness of VET. Disadvantages of the quasi-market approach in Canada include fragmentation, lack of sustainability of initiatives, and potential inequities in opportunities and outcomes for students. Evidence from other countries (OECD, 2000) suggests that there is greater employer participation and the quality of school-organized workplace experience programs is higher when supported by appropriate institutional arrangements. In Canada, articulation between secondary and post-secondary programs is growing but more attention could arguably be given to links between vocational education in high schools, apprenticeship programs, and tertiary education. Given the high educational aspirations of youth and an interest in raising skill levels overall, more attention should be paid to making transitional arrangements inclusive and ensuring mobility within the education and training system. Finally, it is very important that a balance be struck between providing job-specific training to high school students to increase their short-term employability, and ensuring that they are exposed to general knowledge that will help them to progress in a career and develop as citizens.

Acknowledgements

I gratefully acknowledge assistance from the following people in conducting this research: Graduate research assistants, David Burns, Bonnie Watt-Malcolm, and Diane Wishart; Staff from the Department of Education in Newfoundland/Labrador, BC Ministry of Education, Ontario Ministry of Education, Alberta Education, Alberta Advanced Education, Council of Ministers of Education Canada; Association of Colleges of Applied Arts and Technology of Ontario, Alberta Council on Admissions and Transfers; Patti Henley (Career Prep, Alberta), Jerry Heck (CAREERS), John Hennebury (Gonzaga High School, Newfoundland), Peter Noonan (Australia), and Stephen Billett (Professor of Adult and Vocational Education, Griffith University, Australia). I also appreciate the feedback provided by two anonymous peer reviewers on an earlier draft of this report.

Pathways for Youth to the Labour Market: An Overview of High School Initiatives

1. Introduction

The transition from education to working life has become a focus for policy makers across most OECD countries in recent years. In most countries, the transition is taking longer for young people and part of the explanation lies in the pathways through education (OECD, 2000). In particular, concerns have been raised that pathways may be: too narrow, too obscure (lack transparency), and too inflexible (lack of bridging mechanisms). More successful initial transition outcomes tend to be associated with countries where the connections between pathways and their destinations are embedded in solid institutional frameworks.

A study of transition systems across 14 OECD countries (OECD, 2000) identified the following features of effective transition systems:

- A healthy economy (a factor that is sometimes de-emphasized).
- Well organized pathways that connect initial education with work and further study (e.g., clearly defined learning pathways and qualifications frameworks).
- Widespread opportunities to combine workplace experience with education, and bridges between vocational education, apprenticeship, and tertiary education.
- Tightly knit safety nets for those at risk.
- Good information and guidance; and
- Effective institutions and processes.

While this report discusses efforts made in Canada to make pathways more transparent and to pay more attention to non-academic routes, writers suggest that there is much work to be done (de Broucker, 2005; Hardy and Parent, 2003; Smaller, 2003). Vocational programs in public secondary schools have declined considerably in the past three decades in Canada due to concerns about streaming students too early and a decline in many industrial and commercial occupations and jobs (Smaller, 2003). Additional factors include declining enrolments, obsolescence of equipment in many schools, and the tendency to move vocational programs into post-secondary institutions (Council of Ministers of Education Canada, 1998). Employers are often too preoccupied with their short-term labour requirements to engage in collaboration with schools (Hardy and Parent, 2003). Other barriers to creating effective vocational programs include the attitudes of Canadian parents,¹ a highly fragmented employer community, jurisdictional debates between provincial and federal governments, and a lack of strategic policy activities to address the issue at a systems level (de Broucker, 2005). As a result, while “good

¹ An analysis of Youth in Transition data (from a national Canadian survey conducted in 2000) showed that 64 percent of parents of 15 year olds wanted them to achieve one or more university degree (Krahn and Taylor, 2005).

examples of successful vocational programs exist in most parts of Canada, none come close to the scale of the need” (*ibid*, p. 54).

In comparison, other countries do more to provide recognized labour market skills to students at the beginning of upper secondary education either through workplace based apprenticeship (e.g., Austria, Germany, Switzerland) or through school-based vocational systems (e.g., Finland, Hungary, Poland, Sweden) (de Broucker, 2005). As a result, the proportion of young people who have not successfully completed high school and are not pursuing further education credentials in these countries is smaller. In turn, a more effective Canadian system would require:

- Strong political leadership, at federal and provincial levels, to define objectives and set up a framework for developing vocational education pathways.
- More integration of appropriate vocational education into curriculum.
- Improved counselling.
- Addressing the attitudes and expectations of parents and students, and
- Engaging business and labour communities (de Broucker, 2005).

The following report describes some of the efforts being made in these areas.

1.1 Canadian Policy Research Networks’ “Pathways” Research Project

The primary goals of the *Pathways* research project initiated by Canadian Policy Research Networks (CPRN) are to: a) document the range of pathways that Canadian youth take through the formal education system into the labour market, both at the national level and with emphasis on regional variations; b) identify institutional and policy structures that are associated with more successful transitions into rewarding employment; c) identify other factors affecting choice of pathway (e.g., access to programs, attitudes and values related to non-academic pathways, employer practices); and d) recommend policy changes that can improve school-to-work transition processes. CPRN has commissioned a number of studies, with different research questions and methods, to pursue its research goals.

This report focuses on the institutional and policy structures that appear to support or hinder the ability of young people to find pathways that lead to sustained employment with good working conditions, pay, and career potential. Because education is a provincial responsibility in Canada resulting in some variation in approaches and programs across jurisdictions, school-to-work transition initiatives in four provinces are compared: British Columbia, Alberta, Ontario, and Newfoundland/Labrador. Appendix 2 summarizes key initiatives in these provinces.

A section that looks at Australia and the State of Queensland is also included to provide an international comparison. Australia was selected because the institutional context in that country is similar to that in Canada in that both countries lack the highly regulated vocational education and training system of European countries like Germany. Instead, they have adopted a “market” approach to school-to-work transition and rely heavily on voluntary partnerships between

schools, training providers, employers, and unions. However, there are differences in approach that may be instructive for policy makers in Canada.

One of the drivers of policy to address youth transitions to further education and work is an interest in increasing secondary school graduation rates across Canada. The pan-Canadian secondary school graduation rate in 2001 was 75 percent, which is below the OECD average of 82 percent (Canadian Education Statistics Council, 2006, p. 52). The 2002/03 rate in British Columbia and Newfoundland/Labrador was above average at 77 percent while the rate in Alberta was below average at 67 percent (the lowest provincial rate that year) (*ibid.*).² Differences in the graduation rate may partly reflect labour market conditions – for example, Alberta has had a strong labour market with plentiful job opportunities in recent years while regions like Newfoundland and Labrador have had much higher rates of unemployment. Concern about providing options and increasing the skill levels of students who are unlikely to attend post-secondary education have also arisen because of the recognition that these students tend to face more difficulty in the labour market.

The proportion of young adults aged 20 to 24 years who had not successfully completed high school and were not enrolled in a formal education program in 2002 was 11 percent (de Broucker, 2005). This group included more young men (61 percent) and more young adults from low socio-economic status (SES) families. Table 1 below shows that although unemployment rates vary by province, groups with PSE attainment generally experience lower unemployment rates than those with less than high school.

Table 1: Unemployment Rates of 25-29 Year-olds by Educational Attainment, 2004

	All Levels	Less than High School	High School Graduate	College or Trade	University Graduate
Canada	8	15	9	6	7
Newfoundland/Labrador	20	31	24	19	11
Ontario	8	13	9	7	7
Alberta	5	9	5	4	4
British Columbia	7	17	7	5	6

Source: Canadian Education Statistics Council, 2006, p. 249.

Education is also related to earnings. For example, an analysis of full year full-time workers using 1996 Canadian Census data found that high school graduation was associated with an increase in weekly earnings of 4 to 6 percent (relative to non-completers) holding constant years of schooling (Ferrer and Riddell, 2002). A college or trade certificate or diploma increased earning by another 5 percent for men and 3 percent for women, while a bachelors degree increased earnings by 21 percent on average (with some variation by field of study). While pointing to the importance of education, this analysis also raises questions about the value of a

² The graduation rate for Ontario was not provided for 2002/03 (Canadian Education Statistics Council, Table C5.2, p. 216).

high school diploma, both in certifying knowledge/skills and in opening doors to further education.

Concerns about shortages in certain occupational areas (e.g., skilled trades) and a mismatch between students' educational and occupational choices and labour market needs have promoted interest in providing more information to youth about career pathways, and more opportunities to develop skills, particularly in areas of shortage. For example, most provinces have introduced school-based apprenticeship programs that allow students to work toward a trade certification and high school diploma at the same time. This is related to labour shortages and a recognition that the average age of apprentices is high – for example, registered apprentices under age 20 represented only 6 percent of all registered apprentices in 2002 (Canadian Education Statistics Council, 2006, p. 60). All provinces have a variety of work study and cooperative education programs, usually at the initiative of individual school districts and schools (OECD, 1998).

Although no other OECD nation had a higher proportion of its population aged 25 to 64 with either a college or university credential than Canada in 2001, the issue of access to PSE and mobility across different types of programs also continues to be a policy issue. Participation in PSE is influenced by the availability of educational programs, accessibility of financial support, parents' level of education, labour market conditions, and benefits (real and perceived) of education, which differ within and across regions.

The specific questions addressed in this report are as follows:

- How have approaches to school-to-work transition within secondary schools changed over time and what are the roles of the provincial government, school districts, and individual schools?
- To what extent is preparation for skilled jobs available in secondary schools?
- What initiatives/programs are available for youth not bound for college or university and what proportion of youth are engaged in these?
- To what extent do secondary schools help students identify feasible and rewarding career pathways?
- How much mobility is there between programs/pathways within secondary school and afterwards?

2. British Columbia

2.1 Introduction

In 1988, the Social Credit government in BC set up a Royal Commission on Education to begin discussions about educational reform. Then in the early 1990s, the newly elected New Democratic Party organized a premier's summit on skills development and training (Gaskell and Rubenson, 2004). A policy document called *Skills Now* suggested that the education system should improve educational outcomes by linking education more closely to the workplace. Policy-makers advocated for a conceptual merging of academic and vocational traditions in public school and higher education, strengthening links and transitions between schooling and work, and opening more doors to college and university (Lackey, 2004). Restructuring of the system resulted in increased articulation across the various educational institutions, expanded access to post-secondary education, and a greater focus on career-oriented programs. High school reforms included "mandatory career planning programs for high school students; opportunities to gain credit towards apprenticeship and technical training while still in high school; alternative programs to keep students in school; the development of Web-based career planning materials; and a focus on updating vocational training in schools to reflect new technologies" (*ibid.*, pp. 161-2). The current Liberal government has continued with the direction of these reforms. The following sections describe changes in the secondary school program, career initiatives, and links to PSE.

2.2 Secondary School Curriculum/Program

a) *Course Streams*

At the high school level in BC, as in most provinces, students can take different levels of core courses (e.g., math, science, English) depending on their aspirations and grades in lower-level courses. For example, students can choose from three different math courses beginning in grade 10, which direct them on a pathway toward university, college, or the workplace. They can choose from different science and English courses beginning in grade 11. As in other provinces, the majority of high school students take courses that qualify them for university.

In 1997, the Ministry of Education introduced *Applied Academics* courses in math, physics, technology, and communications. The intent was to allow students to keep their options open by acquiring academic qualifications for entry into post-secondary programs at BC colleges, universities and technical institutes but also to gain the skills required for the workplace and job entry. It was assumed that students would be able to move between the Applied and the Principles (university preparation) pathways, selecting the mix of courses that would best fit their career and educational goals. However, although these courses were designed to have parity of esteem with traditional university preparation courses, there was resistance from universities. Therefore, the sharp boundaries and status differences between vocational and academic versions of subjects remain (Gaskell, Nicol, and Tsai, 2004), and the number of students taking these courses is quite limited.

In 2004/05, there were 6,165 course completions in Applications of Math 11 and 12, representing approximately 5 percent of grade 11 and 12 students (personal communication, Ministry of Education, October 2006).

b) Technical Education Courses

The province has developed curriculum for a range of elective high school courses that include shop, woodwork, metalwork, mechanics, drafting, and home economics. School districts and schools then decide what they can offer, given available facilities and staff. Some courses related to different career areas and local labour markets have also been developed locally. Like education systems in other provinces, it is difficult for schools to keep up with emerging technology requirements associated with technical courses. It is also difficult to staff some of the trades-related courses because of the shortage of qualified teachers with expertise in the trades. Thompson River University addresses this concern in part through their accelerated (two-year) Bachelor of Education in Technical Education.

The total number of course completions in grade 11 and 12 courses associated with trades (mechanics/automotive, carpentry and joinery, and metal fabrications) in 2004/05 was 15,190, compared to 13,937 in 2001/02 (a 9 percent increase) (personal communication, Ministry of Education, October, 2006). This represents approximately 0.13 courses per student in grade 11 and 12.

c) Work Experience Courses

Students require 80 credits to graduate with a high school diploma, including 28 electives. Of these, students can receive up to 16 credits for Ministry-Authorized work experience courses. Two Ministry-authorized courses were developed in 2005 with province-wide standards and prescribed learning outcomes. These 4-credit grade 12 courses are each 100-120 hours in length, and at least 90 hours must consist of actual work placement. Before entering the workplace, all students must have an in-school orientation that includes instruction on work site safety. Provincial policy states that, in most cases, work experience consists of school-arranged, non-paid placements (BC Ministry of Education, 2005, March). In addition to these courses, students may engage in work experience through *Independent Directed Studies (IDS)* or *Board/Authority work experience courses*. IDS policy allows students to initiate their own areas of learning and allows schools to recognize prior learning in a course that a student may not have completed. IDS courses can be worth between one and four credits as set out in a plan developed by the student and teacher (BC Ministry of Education, 2005). Board/Authority work experience courses may also be developed for students in grades 10, 11, or 12 to meet local needs and student interests. Therefore, there are several possible courses that can combine learning and work at the high school level.

Course completions in the Work Experience 12 course declined from 18,223 in 2001/02 to 14,327 in 2004/05³ (a drop of 21 percent), which can be explained partly by the fact that supplementary funding is no longer available for enrolment in Career Programs that include a 4-credit work experience course (personal communication, Ministry of Education, October, 2006).

³ Given that there were approximately 50,000 grade 12 students, this represents approximately .28 course completions in “Work Experience 12” per student.

d) Planning 10

In 2004, the Ministry required all students enrolling in grade 10 to take *Planning 10* – a course that addresses education planning, career development, healthy decision-making, and financial literacy. This course replaced a course called Career and Personal Planning. Since then, students have also been required to compile a *Graduation Portfolio* (worth 4 credits) in order to graduate. The portfolio requires students to demonstrate their competencies through a focus on education and career planning, community involvement, and employability skills (Hutchinson *et al.*, 2005).

e) Focus Areas

The 2004 graduation program also introduced *focus areas* as a way of organizing high school courses by area of interest to encourage students to think about their future careers. The eight focus areas are: Business and Applied Business; Fine Arts, Design and Media; Fitness and Recreation; Health and Human Services; Liberal Arts/Humanities; Science and Applied Science; Tourism, Hospitality, and Foods; and Trades and Technology. At the beginning of their high school career in Planning 10, students are to identify one or more focus areas to concentrate on in grades 11 and 12 and in their Graduation Portfolio, they should demonstrate that they have designed a learning program in a focus area.

It is expected that school districts and schools may specialize in certain focus areas through partnership with their community and/or local businesses. In addition, changes to the *School Act* allow students to attend any school in the province provided there is space available. The introduction of Accelerated Credit Enrolment in Industry Training (ACE-IT) programs has also encouraged the development of more career-oriented *magnet schools*.⁴

f) Volunteer Experience

The 1995 graduation program introduced the requirement that high school students complete 30 hours of *work or volunteer experience* before graduating and this continues to be a requirement in the 2004 program. This requirement was introduced to recognize the importance of experiential learning and to encourage the extension of education beyond the classroom into the community. Students must complete the 30 hours in one of the following: a Ministry-authorized work experience course, a school-arranged work placement, volunteer experience, or paid student employment.

2.3 Career Preparation Programs

The province introduced the career preparation program in 1979 to provide grade 12 students with entry-level skills required for apprenticeship occupations. Between 1980 and 1997, the number of career preparation programs expanded from 28 to 2,454 in areas such as business, sales and service, finance and administration, and primary industry (Hutchinson *et al.*, 2005). Currently, career programs in BC include cooperative education, ACE-IT and secondary school apprenticeship. Since career preparation programs are locally developed, individual districts determine requirements. Students in programs normally take a specified number of career-related courses and a work experience component of 100-120 hours. Programs are provided by most school districts and schools to interested students although they are not provincially mandated.

⁴ Magnet schools are schools of choice organized around a particular theme (e.g., music, science). An attraction for students is that they can focus on their talents or interests while studying core curriculum.

Table 2 below indicates the number and proportion of students in BC schools who are engaged in Career Preparation programs. In 2005/06, 23,659 students were participating.

Table 2: Number of Grade 9-12 Students in Career Programs in the Province

School year	# of Students	% of Total Public School Students	% of Total Public/ Non-public Students
1995/96	30,933	5.1	4.7
1996/97	39,278	6.3	5.8
1997/98	45,689	7.2	6.6
1998/99	49,028	7.7	7.0
1999/00	48,253	7.6	6.9
2000/01	48,744	7.7	7.0
2001/02	43,176	6.9	6.3
2002/03	36,228	5.8	5.3
2003/04	31,347	5.1	4.6
2004/05	29,668	4.9	4.4

Source: Hutchinson, Leonard, Ravening, and Semple, 2005.

a) Cooperative Education Programs

In 1996, cooperative education programs were integrated into career programs. Cooperative education programs provide students with opportunities to explore a variety of careers while career preparation programs are more specialized. These programs usually include work experience courses and are developed locally. The aim is to keep students in school longer, provide them with relevant work experience, and support their transitions to work. By 1997/98 there were 2,243 students enrolled in these programs (Hutchinson *et al.*, 2005).

b) Apprenticeship and Technical Training

The *Secondary School Apprenticeship (SSA)* program was introduced in 1995 for students 15 years of age and older as a joint program between the Ministry of Education and the Industry Training Authority (ITA). ITA was established in 2004 to replace the Industry Training and Apprenticeship Commission (ITAC), which was disbanded in 2002. The change reflects a shift in the apprenticeship system toward a competency-based industry training approach that is similar to that taken in New Zealand (BC Construction Association, 2006).

The SSA program allows students to earn up to 16 work experience credits (equivalent to 480 hours of work) toward the 80 credits required for a high school diploma while also working towards an apprenticeship. Students are usually paid at the level of a first-year apprentice. Funding for the SSA is currently part of core per pupil funding; however, additional per student funding specifically for SSA students of \$2,750 along with funding for Career Preparation programs was eliminated in 2002 partly because of concerns about how funds in Career Preparation programs were being used. The cuts were also part of more general funding reductions to school districts that were occurring at the time (personal communication, Ministry of Education, November 2006). Table 3 below indicates that in 2003/04, 508 students or

0.4 percent of grade 11 and 12 students participated in SSA and that figure increased to 727 (0.6 percent) by 2004/2005. The province has not tracked retention of high school apprentices because of limitations in the apprenticeship data system. However, there are plans to do this in the future.

In 2005, the *Accelerated Credit Enrolment in Industry Training (ACE-IT)* program was introduced. ACE-IT programs are designed to provide opportunities for students to earn a Level 1 certification (first level of technical training) in a given trade. In many districts the majority of training occurs in a college context although it is possible for schools and other training delivery agents to provide training if they meet the requirements set by the Industry Training Authority (ITA). Through ACE-IT, students earn credits for their training at post-secondary institutions that can also be applied to their high school diploma. A student can be enrolled in both ACE-IT and SSA programs at the same time. Students in ACE-IT are also part of a pilot project between ITA and the Ministry of Education started in fall 2006 to benchmark their essential skills competency levels using the Test of Workplace Essential Skills (TOWES).

There has been funding support for ACE-IT since its introduction. The ITA provides schools with \$1,000 when a student enrolls in ACE-IT and another \$1,000 when he/she successfully completes the program. In addition, schools are paid \$375 for 120 hours and \$750 for 240 hours of work experience completed by ACE-IT students. School districts are also eligible to apply for grants administered by Skills Canada BC to buy new equipment related to ACE-IT programs.

Although school districts are not required to participate in SSA or ACE-IT programs, 50 of a possible 60 districts enrolled one or more students in SSA in 2005-06. For SSA, schools facilitate the registration but students must find an employer willing to provide training. Table 3 below indicates that in 2004/05, the number of students participating in CTC/ACE-IT was 859 (or 0.7 percent of grade 11 and 12 students). The target by 2010 is to have 10,000 students participating in industry training programs.

Table 3: Participation in Industry Training Programs

Performance Measure	2003/04 Actual	2004/05 Actual	2005/06 Target	2006/07 Target	2007/08 Target	2008/09 Target	2015/16 Target
SSA	508	727	1,000	1,100	1,400	1,500	2,000
CTC/ACE-IT	859	1,822	2,600	3,500	4,000	5,000	8,000

Source: www.bcbudget.gov.bc.ca/2006/sp/educ/Goals_table10.htm

2.4 Career and Technical Centres (CTC)

CTCs are a joint operation of school districts and colleges that were introduced in the mid 1990s to allow students to earn both a secondary graduation and post-secondary certificate in a broad range of trades and technology areas. Currently, there are six CTCs in different regions of the province. Although many CTCs promote technical training in the trades through ACE-IT programs, other programs are provided to students in non-trades programs. For example, CTC programs include tourism, information technology, and computer technology. The government

allows students to obtain dual credit for courses in high school and post-secondary institutions. To participate in programs, school districts and colleges develop articulation agreements.

2.5 Links to PSE

The increasing complexity of post-compulsory education and training systems and interest in promoting lifelong learning has made policy makers more interested in developing more coherent, flexible, and interconnected systems of pathways. Actions to do this include constructing bridges from vocational education to higher education to encourage participation, broadening pathways or deferring decision points to allow people to keep their options open, or introducing such measures as modularization, credit transfer and qualifications frameworks to make the network of pathways more flexible and seamless (OECD, 1998).

Between 2002/03 and 2003/04, 52 percent of BC secondary school graduates made a transition to a BC public institution (35 percent to a college/institute and 17 percent to university) within one year (Student Transitions Project, 2005). A national study reported that, in 2000, the high school “dropout” rate at age 20 in BC was 12.9 percent, which was quite close to the national average (Bowlby and McMullen, 2002). Like other provinces, the rate for young men in BC was almost double that of young women. The Education Ministry has expressed interest in increasing the proportion of students who pursue post-secondary education by ten percent over ten years (see Table 4 below).

Table 4: Transition Rate to Post-secondary Education

Performance Measure	2003/04 Actual	2004/05 Actual	2005/06 Target	2006/07 Target	2007/08 Target	2008/09 Target	2015/16 Target
Transition rate to post-secondary education	69% ¹	74%	75%	77%	79%	81%	85%

¹ Includes students who are attending a post-secondary institution full-time, part-time, or are taking some other form of post-secondary training.

Source: www.bcbudget.gov.bc.ca/2006/sp/educ/Goals_table9.htm

The college transfer system is seen as one way of increasing post-secondary enrolments, since without the option of college transfer, many low achieving high school students would not have access to baccalaureate degree studies (BCCAT, 2005). The transfer system allows students to pursue one or two years of study at a community college, university college, or institute and transfer their credits to a degree-granting institution to complete their baccalaureate degree (Heslop, 2001). The BC Council on Admissions and Transfer (BCCAT) was formed in 1989 as part of the “Access for All” strategy of the provincial government. Its purpose is to coordinate the transfer and articulation efforts of the 27 public and five private institutions within the BC Transfer System (BCCAT, 2005). This transfer system was born in the late 1960s with the creation of two-year colleges that deliver first- and second-year university courses for the purpose of transfer to universities.

A 2001 report suggested that, on average, about 40 percent of students in British Columbia who enter universities each year transferred from a BC college, institute or university college (BCAAT, 2001). Students often start at a community college because it eases their transition from high school to university, tuition rates are lower, and the chances of earning a higher GPA are perceived to be higher (BCCAT, 2005). Compared to grade 12 entrants, college transfer students are more likely to be older, female, have family commitments, and tend to be working while studying part-time (BCCAT, 2005, Heslop, 2001). They also come from a wider range of academic backgrounds. Despite this, they enter university with an average grade of approximately 70 percent and graduate with average grades 5 percent lower than direct entrants (Heslop, 2001). In addition, although direct entries to university earn degrees at a faster rate than college transfers, the completion rates for both groups are comparable over time (Gomes and Ducharme, 1994).

2.6 Conclusion

Given that school districts have autonomy to decide whether and how career transition programs are offered, it is not surprising that there is diversity in this area. A report of career development programs in three school districts – Central Okanagan, Langley, and Vancouver – provides a sense of the size and type of programs found in different areas of the province (Hutchinson *et al.*, 2005). Researchers found that although all districts had career preparation, transition, and SSA programs, “the specific manifestation of these programs is driven largely by the availability of trained and interested teachers and the interest of students” (p. 52). Participants in the study saw strong leadership and the priority given to programs in terms of resources as key to their effectiveness. Provincial government resources were also important. For example, the elimination of targeted funding for career programs around 2001 negatively affected the ability of districts to offer career programs, while more recently, the funding provided through ACE-IT supports the development of such programs.

Although vocational education was in a downward spiral 20 years ago, a number of provincial programs were created and expanded in the mid to late 1990s (personal communication, BC Ministry of Education representative, April 2006). The last two years have seen increased emphasis on vocational courses and industry training. In 2002, the BC Ministry of Education undertook a review of the graduation requirements and the Career and Personal Planning curriculum. During the period that followed, *Planning 10* and the *Graduation Portfolio* were introduced and school districts were granted more autonomy to design their own career programs and to determine the grade level at which they are offered (Hutchinson *et al.*, 2005). Philosophically, there appears to be increasing interest in developing partnerships between schools and business, labour, government, other educational institutions, and community.

A number of initiatives to promote career education and smoother transitions from high school to work or to post-secondary education have been introduced in recent years in BC. In the implementation of policy, the province appears to be grappling with similar issues to those faced by other jurisdictions – how to provide a balance between provincial control and local autonomy, how to encourage greater valuing of non-university pathways for students, how to introduce reforms that allow for greater flexibility and mobility between programs as well as more transparent pathways, and deciding how to allocate resources to improve outcomes. This review

suggests that the current approach favours local autonomy while providing incentives to increase the articulation between high schools and colleges and links with the employer community.

3.0 Alberta

3.1 Introduction

In the 1980s and 90s, the Department of Education in Alberta initiated several policy processes aimed at making educational programs more relevant to changing political, social, and economic realities. The 1984 *Review of Secondary Programs* was commissioned by Education Minister Dave King, followed by a *Practical Arts Review* undertaken in 1988 by the Curriculum Design Branch. In the early 1990s, the province also introduced a Registered Apprenticeship Program (RAP), aimed at encouraging high school students to consider careers in the trades. The goal of developing a more outcomes-based, accountable system was expressed in Education Minister Jim Dinning's *Vision for the Nineties* (Alberta Education, 1991) and operationalized in Minister Halvar Jonson's *Meeting the Challenge: Three-Year Business Plan for Education* (Alberta Education, 1994). A *Framework for Enhancing Business Involvement in Education* (Alberta Education, 1996) was a key part of the implementation of this three-year plan.

During the 1990s, the models provided by external groups were also influential. For example, the education department supported the establishment of an industry-driven organization called CAREERS the Next Generation (described below). The department also began to support the expansion of Tech Prep Consortia across the province, based on a model operating in the city of Red Deer (which was, in turn, based on US models). More recently, the department's review of the Career and Technology Studies (CTS) program reflects the influence of career pathways initiatives in different school districts. The current situation in Alberta can therefore be described as a combination of locally-developed models and provincial directives which share a market approach to vocational education and training (VET).

3.2 Secondary School Curriculum/Program

a) *Academic Streams*

As in British Columbia, the high school program in Alberta includes students in grades 10 to 12. Grade 10 students choose from different streams of academic courses that are associated with pathways toward university, college or the workplace. Prior to 2006, students could take Integrated Occupational Program (IOP) courses (described in more detail below) that lead to a separate certificate. High schools also commonly offer academic streams such as International Baccalaureate (IB) and Advanced Placement (AP) courses for honours students (i.e., those achieving 80 percent or above in a pre-requisite course).

b) *Career and Life Management (CALM)*

The CALM course is mandated for high school students as part of graduation requirements. It is usually taken by students in grade 10 and has learning outcomes associated with personal choices, resources (financial) choices, and career and life choices. The third area encourages students to examine the components of career development, to develop a profile based on interests and competencies (e.g., a career portfolio) and to develop strategies to deal with the transition from high school to PSE, training, or the world of work.⁵

⁵ Information about CALM can be found in the Implementation guide and other materials on the government website: www.education.gov.ab.ca.

c) Career and Technology Studies (CTS)/Career Pathways

In 1988, the Department of Education decided that the practical arts curriculum must be updated to “help students prepare to enter the workforce ... with the skills, knowledge and attitudes needed to help to ensure Alberta a competitive place within the global trading community” (Curriculum Development Branch, 1989, p. 4). The Practical Arts review focused on 250 course codes in junior and senior high school home economics, business education, industrial education, personal development, and work experience education.

The assumption was that the old practical arts curriculum did not adequately prepare students for knowledge economy work. In addition to economic changes, other reasons for the review involved concerns about declining enrolments in practical arts subjects, aging of equipment, and under-utilization of facilities. Studies by Alberta Education and by the Calgary and Edmonton public school boards all indicated reduced student enrolment in most practical arts courses since the mid-1980s (Curriculum Development Branch, 1989, p. 20). This reflected not only an increased number of students choosing other options such as second language or computer courses, but also an increase in the number of core courses required to graduate.

The CTS program was phased in between 1992 and 1996 to replace the old practical arts curriculum. Its modular curriculum structure is based on the development of competencies in 22 occupational strands. New courses in tourism, design and innovation, media technologies, and energy and management were developed. Each strand includes a set of one-credit courses related to different industry sectors (agriculture, manufacturing, construction, business, health, finance). The strands and courses offered vary between schools, school boards, and regions, partly in response to local interest and demand. The modular approach was intended to provide greater flexibility for students and local jurisdictions. It also allowed opportunities to integrate CTS strands internally and with other curricula (Buck, 2000).

CTS also takes a “competency-based” approach, meaning that courses may be accessed by students in different grades and that prior learning and experience can be taken into account in assessment so that the time required to complete courses may be reduced. The extent to which this occurs varies across schools since it is a local decision and teachers are responsible for the safety of students.

As a result of Alberta Education’s review of CTS in 2003 by the System Improvement and Reporting Division and recommendations in the report of Alberta’s Commission on Learning in 2003, the CTS curriculum is currently being restructured. The goal is to make CTS more relevant for all learners by packaging courses that are related to different *career pathways* (personal communication, Alberta Education representative, June 2006). Work is therefore under way to develop eight different clusters of senior high CTS courses using National Occupational Classification codes that will guide students toward different career options. The eight clusters include: Business, Administration and Finance (NOC #1); Natural and Applied Science (NOC #2); Health and Human Sciences (NOC #3 and 4); Arts and Communication (NOC #5); Tourism, Sales and Service (NOC #6); Agriculture, Forestry, Oil and Gas (NOC #8); Processing, Manufacturing and Utilities (NOC #9) (www.education.gov.ab.ca).

Some school districts in Alberta had already been experimenting with Career Pathways models. For example, the Calgary Board of Education identified ten pathways that represent broad

economic sectors. The Career Pathways framework is designed to provide “an integrated learning experience” that includes coursework, off-campus experiences, and career guidance that help students make the transition to further education and/or work (see website: www.cbelearn.ca/pathways/).

The Department of Education has also joined with two other ministries – Advanced Education and Human Resources and Employment – to produce a career development strategy for Alberta. This initiative will promote “learner pathways” in schools beginning in elementary grades, encouraging students to identify and develop important competencies for work and life (personal communication, Alberta Education representative, June 2006).

Instructional funding for CTS courses is similar to funding for other junior and senior high courses. However, the requirement for smaller class sizes may present a disincentive for schools in decisions about CTS programming. Further, the difficulty in hiring qualified CTS teachers has contributed to a decline in facilities. A review of funding and teacher supply for CTS programs is part of a plan to review and refocus CTS, scheduled for completion by about 2010.

A shift in direction from the delivery of earlier practical arts curriculum has been the emphasis in CTS on “partnerships with community agencies, business and industry” in order to provide opportunities for students to “access modern and changing technology, expertise, role models, mentors, specialized libraries, hands-on activities, meaningful decision-making situations, and continuity of experience and commitment” (Curriculum Development Branch, 1989, p. 33). The decline in school facilities also encourages the development of partnerships to provide off-campus opportunities for students.

CTS was designed to appeal to the “middle majority of students” in junior and senior high school (grades 7 to 12) (Lehmann and Taylor, 2003). Data from the Department of Education suggest that there was close to gender parity in CTS overall with young women representing 46 percent of the total number of students in CTS courses in 2001. However, gender differences persist in the type of subjects chosen (e.g., welding vs. cosmetology). Based on credit completion data gathered from 1997 to 2005, the total number of CTS course completions have remained generally constant each year, with an overall 12 percent decrease at the introductory level, 24 percent increase at the intermediate level, and 8 percent increase at the advanced level (personal communication, Alberta Education representative, June 2006).

During the 2004-2005 school year, credits granted in CTS courses accounted for approximately 14 percent of the total number of high school credits granted by Alberta Education in all core and optional subject areas. That year, approximately 90 percent of Alberta’s high school students earned six or more credits in CTS; students awarded an Alberta High School Diploma earned an average of 118 credits in total and 18 credits in CTS (personal communication, Alberta Education representative, June 2006).

The modular approach provides greater flexibility for students to try CTS options. The current review is attempting to articulate the different post-secondary and work pathways that students can pursue with an emphasis on CTS options as well as core courses.

d) Work Experience Courses

Work experience courses are offered in high school to provide opportunities for experiential learning activities as part of their program under the supervision of a teacher-coordinator and employer. These courses may be offered for between 3 and 10 credits with each credit based on 25 hours. Since 1994, the number of work experience credits that may be counted toward the Alberta High School Diploma is 15 (of a required 100). Although there are no basic learning resources for these courses, a CTS module entitled Job Preparation is a required component of the first work experience course taken by students. Two other CTS courses (Job Maintenance and Preparing for Change) are recommended parts of the second and third work experience courses taken by students. Students may be eligible to earn work experience credits based on part-time paid work.

Interestingly, despite the economic boom in the province, the number of completions for off campus courses – which include work experience, Registered Apprenticeship Program (RAP), and Green Certificate courses – fell from 38,087 in 2003/04 to 30,695 in 2005/06 (personal communication, Ministry of Education representative, October, 2006). This is a decline of 19.4 percent, despite a slight increase in the student population in the province.

e) Integrated Occupational Program/Knowledge and Employability Courses

The 1984 secondary program review led to the introduction of *Integrated Occupational Programs* (IOP) around 1986/87. IOP was to be replaced by *Knowledge and Employability* (K and E) courses in the fall of 2006. IOP and K and E are significant because they prepare students directly for work by allowing students to earn a Certificate of Achievement (requiring a minimum of 80 credits) as opposed to a high school diploma (requiring a minimum of 100 credits). By continuing to offer a separate diploma for students in this program stream, Alberta is resisting the national trend toward less course and program streaming at the secondary school level (Davies and Guppy, 2006).

According to the 1994 Information Manual for Administrators, Counsellors, and Teachers, this program was designed for students in grades 8 through 12 who were experiencing difficulties with higher level elementary and secondary programs. The target population was students who had demonstrated levels of achievement below those of their age peers and who appeared to benefit from concrete learning experiences. It was not supposed to include students with special needs, students whose behaviour was disruptive, or students whose needs could be better met through remedial classes.

Information produced in 1998 by Alberta Education states that IOP was for “at-risk” students aged 12.5 to 19 years of age. IOP students were awarded a Certificate of Achievement after completing at least 80 credits (Alberta Education, 1998). Of these, 40 had to be in IOP occupational courses. IOP curriculum was designed to provide concrete learning experiences, and occupational courses were to include off-campus learning, job shadowing and mentoring.

IOP students were said to represent between four and eight percent of the junior/senior high school population and it was estimated that about two-thirds of IOP students were male (Alberta Education, 1998). More recent estimates are that approximately 8 percent of the high school population is in IOP, although not all high schools offer this program (personal communication, Alberta Education, May, 2006).

A provincial committee began to review IOP programs in the late 1990s. Issues arising in consultations were whether IOP programs were actually serving the population for which they were intended (since students with special needs were often enrolled in these courses), the value of the certification, the need to update resources, mobility between IOP and other transition programs, and whether the program should begin in grade 7.

As a result of the review, the curriculum has been re-written/updated and new authorized teacher resources are available in K and E courses. The Certificate of Achievement will continue to be offered. However, students will be required to successfully complete a math or science course at a grade 11 level (previously grade 10 was sufficient) and students are required to complete an off-campus placement. The decision was made not to begin IOP in grade 7. While IOP tended to be offered as a program by most schools, the new curriculum is aligned more with other curriculum. However, the focus continues to be on preparing students for working life. IOP and the new Knowledge and Employability courses are funded at a higher level than other courses.

Schools offering IOP are required to provide work placements for students and therefore partnerships with local employers are necessary. Universities and post-secondary institutions do not recognize the Certificate of Achievement. If Knowledge and Employability courses are not presented as a program but rather as individual courses, there may be greater opportunity for students to achieve a high school diploma. However, these courses continue to lead students to a differential qualification. It is possible for students in IOP (and in the new courses) to participate in the RAP program, although this has not occurred to a great extent in the past.

3.3 CAREERS the Next Generation

CAREERS the Next Generation (CAREERS) is an industry-based not-for-profit foundation which aims to link workplace and classroom learning, promote pathways to careers, and develop a skilled workforce for industry in Alberta. It developed partly out of previous work done by the Alberta Chamber of Resources and Alberta Education and was established in 1997.

The foundation operates with a Board of Directors, Advisory Council, and Implementation Team that includes over 20 members. The majority of the 14-member Board of Directors comes from business and government. The chair of this board is Eric Newell (former Chair and CEO of Syncrude Canada and current Chancellor at the University of Alberta).

Funding for CAREERS comes from government and the private sector. For example, the provincial government contributed \$748,211 in 2005 (Annual report). Funding supports the employment of team members who promote partnerships at the community level. Each fall, members of the Implementation Team go into schools in communities across Alberta to present workshops on employability skills and career opportunities, with a primary focus on trades and health services occupations.

CAREERS promotes other partnerships also. For example, a three-year Aboriginal Youth Initiative was developed to provide Aboriginal youth in 14 communities and two urban centres with opportunities to enter the Registered Apprenticeship Program or other career pathways. Project sponsors included Alberta Human Resources and Employment, BP Canada, CAREERS,

EnCana, Suncor, Syncrude, and Western Economic Diversification. Furthermore, funding from Alberta Health and Wellness helps to support a provincial health services project designed to “grow a future talent pool of high quality health care workers” (website: www.nextgen.org). This project allows grade 11 and 12 students to participate in a six-week summer internship in health care facilities across the province. They earn high school credits while earning money and learning about careers in this sector. Finally, CAREERS has been an active promoter of the Registered Apprenticeship Program in communities across the province since the mid 1990s.

CAREERS’ annual reports suggest that their activities have grown since 1997, as suggested in Table 5 below. For example, almost 30,000 students in 317 junior and senior high schools in 207 communities across the province took part in classroom presentations and workshops in 2005. 865 employers provided career exploration opportunities to 1,479 students.

Table 5: CAREERS Activities, 1997-2005

	1997	1999	2001	2003	2005
Schools	16	107	147	245	317
Communities	13	49	84	149	207
Employers	57	354	569	755	865
Interns	53	355	704	1,162	1,479
Workshop Participants	2,500	12,000	16,500	26,721	29,311

Source: 2005 Annual Report, CAREERS the Next Generation

3.4 Career Prep

Career prep programs (formerly called Tech Prep), modeled on those in the US, were first introduced in central Alberta in 1995 and were then adopted in different regions of the province. The goal of these programs is to help students explore career choices, set career goals and work towards achieving them. They are “tripartite programs” that include school-based learning, a work-based component, and connecting activities. Programs focus on developing students’ workplace competencies in broadly defined occupational strands within CTS, teaching high school subjects in an applied manner, linking high school and college curriculum through articulation agreements, and providing opportunities for workplace learning. In central Alberta, students can choose from four career areas: technology and natural resources, business, human services, and the arts.

Although Tech Prep programs in the US promote the idea of applied courses, there has been little provincial support in Alberta for developing such curriculum. In 1997 the central Alberta consortium began some of this work, purchasing US curriculum, but did not continue because of a lack of funding and concerns about US-based content.

Central Alberta Tech Prep changed its program name to Career Prep in 2004 to reflect a broader focus on career development information for all grade 9 to 12 students. Career Prep opportunities include Tech Prep, RAP, Green Certificate (agriculture related work) and Health Internships.

Students in grades 9 to 12 can participate in Career Prep/Tech Prep programs in different regions of the province. Approximately 31 school districts are reported to be at various stages of implementation. Published information states, “although this program is available to all high school students, the academic requirements may provide a challenge for some students” (see website: www.careerprep.ab.ca). Therefore, the main target is students who are college or technical institute bound, although program information also invites workplace and university-destined students to consider enrolling.

Unlike Tech Prep programs in the US, which are generally offered in segregated specific technical schools, Alberta’s program is integrated into regular, comprehensive high schools. Students are required to take 20 credits in non-core subjects (e.g., CTS), eight credits in work experience, minimum 10 credits in math (college or university streams) and minimum 10 credits in science (college or university streams). The work experience component includes a compulsory safety course, standard first aid and CPR. Credits in work experience (200 hours) and non-core credits are to focus on a particular occupational cluster. Students are also required to produce a Career Portfolio, which emphasizes their development of employability skills.

The Education Department provides \$60,000 of funding to a provincial Consortium. In addition, several regional branches of *Alberta Human Resources and Employment* help support consortia in their areas. Career Prep programs involve local school districts, community colleges, and business/industry. Business and industry partners are involved through advisory roles, as classroom resource personnel, and by providing work placements for students.

Enrolment in Career/Tech Prep has grown, with graduate numbers increasing from 19 in 1996 to 201 in 2003, and 250 in 2005. However, this continues to represent a very small fraction of high school students. Information about the destinations of students (e.g., college, technical institute, university) is not collected. The majority of graduates come from central Alberta (170 expected in 2006). It therefore continues to be popular in Central Alberta but has waned in other parts of the province (personal communication, Provincial Career Prep Consortium). One challenge for schools concerns the time required to monitor student progress toward credential requirements.

Career Prep is intended to enhance the value of the high school diploma for students. Most attempts at articulation have focused on high school to college transitions. For example, agreements have been signed with various post-secondary institutions in the province of Alberta to recognize the benefit of the Career Prep credential to the student pursuing further education. Examples of recognition include: advanced credit or placement; scholarships; preferential consideration for admission to a program; preferential admission to residence; waiver or reduction of some administrative fees; dual enrolment, (i.e., taking college courses while in high school, although this not common); and RAP practical experience credit for high school and apprenticeship requirements.

In addition, more than 83 articulation agreements have been negotiated between school divisions or Career/Tech Prep consortia and colleges and technical institutes to facilitate the granting of advanced credit (see website: www.careerprep.ab.ca). The responsibility for negotiating articulation agreements rests with members of consortia. Therefore articulation tends to be limited geographically to colleges in the same region as the high school and to individual courses

that are usually non-core (Lehmann and Taylor, 2003). One limitation is that this process tends to be expensive and time-consuming. Students enrolled in Career Prep may also be enrolled in the Registered Apprenticeship Program (RAP) and Green Certificate.

The Career Prep credential is recognized by Alberta Education on transcripts. Central Alberta Career Prep, the most developed program, is provided in 37 schools, includes grade 9 students, and has established an Aboriginal project with two Reserve schools.

3.5 Registered Apprenticeship Program (RAP)

Alberta introduced RAP in 1991, largely in response to concerns raised by provincial employers about skill shortages in the trades (e.g., Alberta Chamber of Resources and Construction Owners of Alberta 1990). RAP provides opportunities for high school students as early as grade ten to earn credit toward a journeyman certification and a high school diploma at the same time. Apprentices are paid at least minimum wage and work only part-time until they complete high school. If they begin in grade ten, they can complete the hours required for the first year of their apprenticeship by the time they finish high school.

RAP is available at high schools across Alberta, although because RAP courses involve on-the-job training, the availability of RAP depends on the willingness of employers to employ apprentices. There are eight 5-credit RAP courses (125 hours each) available for each of the 50 apprenticeship trades, which are funded in the same way as other high school credits. Students generally do not take the technical training part of the apprenticeship while in high school. Schools that are involved in RAP are responsible for inspecting and approving RAP work sites annually, and visiting students in the worksite. Participating schools are required to have a designated RAP coordinator.

RAP is a joint venture of the Department of Education and Apprenticeship and Industry Training (AIT) (AIT is part of Advanced Education). Other key players include CAREERS the Next Generation, local employers, schools, and students. For example, a partnership between AIT and CAREERS was established in the mid 1990s with CAREERS working to promote RAP in schools and find apprenticeship opportunities for students in communities across Alberta.

Table 6: RAP Participation

Year	Number of RAP Participants
1992	29
1996	181
2000	663
2004	1,070

Source: Alberta Apprenticeship and Industry Training Board, 2004-2005 Annual Report.

Table 6 suggests that although enrolments have increased over time, the program continues to represent a small proportion of high school students overall – less than one percent of high school students in Alberta. The five most popular trades in terms of enrolments in 2004 were

welder, automotive service technician, heavy equipment technician, electrician, and carpenter. Similar to the apprenticeship program overall in Alberta where women comprise approximately 10 percent of all apprentices, the majority of RAP participants are male.

Students in RAP are also required to complete the requirements for a high school diploma but can earn up to 40 RAP credits in the process (Alberta Learning, 2003). Individual institutions are responsible for articulation between apprenticeship and other post-secondary training. According to a representative from Alberta Apprenticeship and Industry Training, “a lot of work needs to be done” to recognize prior trades training (personal communication, June 2006). However, there is reported to be considerable mobility between related trades.

The goals for RAP were: to promote apprenticeship, to provide alternative learning pathways for students, to assist students in their transition from school to work, and to establish partnerships between local employers and schools (HarGroup Management Consultants, 2001). It was also believed that RAP could provide a purpose for disaffected youth who might otherwise drop out of high school.

The provincial government reports RAP data and commissioned an evaluation of RAP in 2001 (HarGroup Management Consultants, 2001). At the time of the survey, there were 746 RAP students in the program, 190 who had left the program, and 250 ex-RAP apprentices or journeypersons. Surveys of young people as well as parents, employers, and high school representatives suggested high levels of satisfaction with the program. For example, at least 62 percent of survey respondents in the different groups agreed that RAP provides an incentive for students to stay in school, and 80 percent agreed that it helps students in career planning. Of students who had left the trade, 39 percent did so because they lost interest, 19 percent had a problem with their employer, and 12 percent had been laid off.

Between 1995 and 2000, approximately one third of Alberta high schools had at least one student enrolled in RAP. Further, the number of employers participating increased from 5 in 1991 to 92 in 1995 and 527 in 2000. As of December 2004, the number of RAP participants still in high school totalled 1,223. The Alberta Apprenticeship and Industry Training Annual Report 2004-2005, stated that RAP apprentices who had completed high school totalled 1,749 and those who had become certified trades people since the inception of the program totalled 668 (Alberta Advanced Education, 2005). For 1999, the RAP completion rate was 37 percent compared to 50 percent for regular apprentices (personal communication, representative from Alberta Advanced Education). The lower completion rate is attributed to the fact that many RAP students are still engaged in career exploration.

3.6 Links to PSE

Alberta youth can choose from a wide variety of post-secondary options including private and public colleges, technical institutes and universities. The system has grown in recent decades and now includes four universities, 14 publicly funded colleges, eight private university colleges, two technical institutes and 140 small private training institutions. Universities offer a range of undergraduate and graduate degree programs (Athabasca University offers these through distance learning). Colleges offer a variety of educational programs ranging from academic

upgrading and job readiness to apprenticeship training and other certificate and diploma programs. A number of the larger colleges also have credit transfer agreements with provincial universities so that students can complete the first two years of their degrees in a college and transfer to university to complete their degree. By 2006, a number of these colleges had been given the right to award baccalaureate degrees. Private university colleges are also accredited to grant undergraduate university degrees (Krahn and Hudson, 2006). The two technical institutes (Northern and Southern Alberta Institutes of Technology) offer certificate, diploma, baccalaureate and applied degree, apprenticeship and continuing education programs in a wide range of career fields. They also offer credit and non-credit courses and programs in all industry sectors including customized training for domestic and international corporate clients (*ibid.*). Finally, there are over 140 small private training facilities in Alberta, which offer programs under the Private Vocational Schools Act (*ibid.*).

The Alberta Council on Admissions and Transfers (ACAT) was established in 1974 to develop policies, guidelines, and procedures to facilitate transfer agreements among post-secondary institutions. Transferring across institutions appears to be a common experience for students. For example, a 2004 survey of 2001/02 graduates of post-secondary institutions in Alberta found that 45 percent had taken post-secondary courses (excluding adult upgrading) prior to enrolling at the institution from which they graduated (Alberta Learning, 2004). The transfer phenomenon is largely one of students transferring to universities from public colleges with university transfer programs (representing 37 percent of all transfer students in 2005, personal communication, ACAT, November 2006). Between 1999 and 2002 the transfer rate from colleges to any other institution within Alberta's publicly funded system was 34 percent (personal communication, Alberta Advanced Education, November 2006).⁶ The technical institutes (NAIT, SAIT) do not have formal university transfer programs.

3.7 Conclusion

The preceding discussion depicts a variety of initiatives aimed at facilitating students' transitions to PSE and work in Alberta. Initiatives such as Career Prep and RAP aim to develop links between high schools, apprenticeship training, and college programs. However, there has not been the same level of government support for dual credit initiatives or for promoting in-school apprenticeship training to high school students as in BC. A unique feature of the government's approach in Alberta involves support for an industry-led partnership foundation to broker partnerships between school districts, post-secondary organizations, and employers in communities across the province. The CAREERS the Next Generation foundation receives support from government and the private sector to promote career pathways for students in areas of perceived labour shortage.

Like other provinces, models developed by local school districts tend to be encouraged by the education department as they achieve success. However, to date, a small proportion of high school students in the province participate in career-oriented programming. Ongoing concerns about the low high school completion rate in Alberta relative to other provinces and calls from

⁶ This transfer rate is for formal university transfer programs at Alberta public colleges and refers to students in their third year of post-secondary education (since transfer programs usually apply to the first two years of a program).

employers for skilled workers appear to be increasing policy interest in expanding the type and flexibility of learning options for young people.

4.0 Ontario

4.1 Introduction

In the last half of the 1990s, a series of legislative acts and cabinet decisions under the Harris Conservatives resulted in educational changes that included new curriculum and a new four-year high school program. Many of the educational reform ideas developed by the Conservatives had their origins in the *Royal Commission on Learning* report released by the NDP in 1995. Elected in 2003, the McGuinty Liberals have continued in the direction of attempting to forge tighter links between secondary schools and receiving institutions (colleges, universities, and employers).

The Common Curriculum initiative completely revamped the curriculum in grades 1 to 8. In addition, a four-year high school program replaced the previous five-year program in 1999 and the new high school program included new curriculum. For example, Grade 9 and 10 students can now choose Academic courses (focused more on theory) or Applied courses (emphasizing applications). Locally developed courses called Essentials courses are also provided in some schools for students who are struggling to achieve their graduation requirements. In grades 11 and 12, students choose from “destination” courses that are intended to lead them to university, college, or work. To graduate with an Ontario Secondary School Diploma (OSSD), students are required to: complete 30 credits of 110 hours each (including 18 required courses), complete 40 hours of Community Involvement, and pass an Ontario Secondary School Literacy Test (or course equivalent). The new program also emphasizes the importance of out-of-classroom career-related experiences for students, and, for the first time, requires all school boards to offer cooperative education, work experience and school-to-work transition programs to all interested students. Expanding the availability of these programs for high school students across the province is currently a Ministry priority.

The Education Ministry is currently in the process of passing legislation that would require young people to keep learning in a classroom, apprenticeship, or workplace training program until the age of 18 (the school-leaving age was previously 16 years). Success in the *Learning to 18* strategy is to be measured by improving student achievement, reducing the drop out rate, increasing the graduation rate and ensuring that every student has a good outcome from public education.⁷

4.2 Secondary School Curriculum/Program

a) *The Reorganized Program*

Alan King and his associates conducted a series of studies of the impact of the reorganized program on student progress to graduation between 2000 and 2004 (King, Warren, Boyer, Chin, 2005). Their findings suggest that the four-year graduation rate for the second cohort of students in the reorganized program (57 percent) is lower than the rate in British Columbia (72 percent), Nova Scotia (82 percent) and New Brunswick (83 percent). The five-year graduation rate of 70 percent is better but is still lower than the five-year rate under the previous Ontario program of

⁷ This information is available in the Phase 9 Request for Proposals (www.gotocollege.ca).

78 percent. The lower graduation rate is attributed partly to the relatively high failure rates in grade 9 and 10 Applied and Essentials courses. In addition, some educators have attributed higher failure rates in math, English and sciences to the compression of a five year secondary curriculum into four years.

The viability of the work and college sequences of courses in grades 11 and 12 is also a problem. Of 92 schools surveyed, just over half ran Workplace courses in English and Science (King *et al.*, 2005). Similarly, few schools offer college-preparation courses in most subject areas making graduating in the college sequence “almost impossible in most schools” (King *et al.*, 2005, p. xi). Most schools with technological education facilities try to offer Workplace Technology courses but students are often combined across grades to meet minimum class size requirements.

Comparing the destinations of students from the reorganized vs. the old program, it appears that more students are currently going to university, slightly fewer are going to college, and far fewer are graduating from high school (King *et al.*, 2005). A number of initiatives are currently underway at the provincial level to improve students’ progression toward graduation and transitions to post-secondary education or work.

b) Technological Education

King *et al.* (2005) suggest that many schools lack the facilities to offer a full range of technological education (tech ed) courses. However, a Ministry of Education (ME) representative suggested that of 800 high schools in Ontario, just over 700 have tech ed programs and facilities (Personal Communication, October 2006). The number of credits earned in this area in 2004/05 was 416,000 (*ibid.*).

A summary of technological education credits by secondary school course for 2004/05 indicate that the most popular areas of study were: Transportation technology (15 percent of credits) followed by Communications technology (14.9 percent), Computer technology courses (14.5 percent), Construction technology (12.4 percent), Technological design (8 percent), Manufacturing technology (7.7 percent) and Hospitality and tourism (5.5 percent). Interestingly, males earned almost three times as many technological education credits as females (personal communication, Ministry of Education, October, 2006). Overall, technological education credits earned in 2004/05 were approximately nine percent of all secondary school credits.

Recommendations made by the colleges of Ontario (ACAATO, 2006a) to the Ministry review of technological education curricula include:

- Introducing a mandatory Technology credit for all secondary students in grade 9.
- Establishing and supporting formal board and school level technological education partnerships with college, industry and school board representatives.
- Providing professional development opportunities for technological teachers on a formal (college/university level) and informal (industry) basis.

At the same time, concerns about course availability were raised. Writers comment “It is currently difficult for colleges to identify technological courses as recommended or required for

entry because of their sparse availability across the province” (ACAATO, 2006a, p. 5). Colleges also suggested that there should be more university/college courses available in technological education.

As in other provinces, it is difficult to find qualified teachers since in most cases technological education teachers have been working for a minimum of five years and usually must take a considerable drop in pay as a first-year teacher. Some boards recognize technological education teachers’ time in the workplace on their salary scale to help offset the salary differential. Boards that do not recognize related work experience and boards in the Greater Toronto Area are apparently experiencing the greatest difficulty in attracting technological education teachers (Personal Communication, Ministry of Education, October 2006).

c) Cooperative Education

Cooperative education courses are based on related courses from an Ontario curriculum policy document or a Ministry-approved locally developed course and a cooperative education course. The latter includes a classroom component, comprising pre-placement and integration activities, and a placement component. Students therefore earn cooperative education credits by integrating classroom theory with planned learning experiences in the community.

The “Double Cohort Study: Phase 4 Report” suggests that although the visibility of Cooperative Education in Ontario schools has improved over time, there is much variation in how it is presented and how students apply for co-op courses (King *et al.*, 2005). For example, some guidance counsellors and school administrators perceived Cooperative Education as “inappropriate for ‘academic’ students” (p. 84).

Since the introduction of new curriculum, there has been a decline in the proportion of students participating in Cooperative Education from 22.6 percent in 2001 to 16.7 percent in 2004, which King *et al.* (2005) attributes partly to increased graduation demands in the new program which make it difficult for students to fit co-op courses into their timetables. The finding that co-op participation is significantly higher for fifth-year (or returning grade 12) students supports this. In 2004, 16.7 percent of grade 12 students compared to 21.4 percent of “fifth year” students took co-op education (King *et al.*). Female participation in co-op courses was slightly higher than for males. Further, the participation rate was lower proportionately for students who planned to attend university compared to those who planned to enter college, apprenticeships, or work after secondary school. However, King *et al.* found that students with post-secondary education plans were more likely to see a strong link between the co-op experiences and their career plans, raising the question of how co-op serves the needs of students who plan to go directly to work after high school. Most grade 12 students who did not take co-op cited logistical constraints (King *et al.*, 2005).

d) Community Involvement Requirement

The Community Involvement requirement for secondary students was first implemented within the reorganized program in 1999. Students are required to complete a minimum of 40 hours of community involvement activities during the secondary school program in order to graduate. The goal was to encourage students to “develop awareness and understanding of civic responsibility and of the role they can play in supporting and strengthening their communities” (Ministry of Education, 1999).

e) Teacher Advisor Program (TAP)

The Teacher-Advisor Program was also implemented in 1999 in secondary schools. Teacher advisors were intended to complement the work of guidance counsellors by helping students to complete an annual education plan, and monitoring their progress. They are responsible for meeting with students regularly to help them make informed choices at key transition points in their schooling (Ministry of Education, 1999).

4.3 Passport to Prosperity

In the late 1990s, the Education Ministry encouraged the formation of the Ontario Learning Partnership Group (OLPG) (now called the Ontario Business Education Partnership), which was used to coordinate a campaign called *Passport to Prosperity* to mobilize employers. Partnership members include business or industry education councils, and in areas without these organizations, local training boards. Training boards were established in the mid-1990s as a joint federal-provincial initiative to address local labour force development and include labour as well as employer representation, while a number of business or industry education councils were established with the help of provincial funding support in the mid-1980s, and involve education and employer representation (Taylor, 2005).

The Provincial Partnership Council was created in April 1999 to lead an employer recruitment effort and to help create more opportunities for high school students to get work experience. Top business and community leaders from across Ontario joined forces with the Ministry of Education and the Ministry of Training, Colleges and Universities (MTCU) in support of this effort.

4.4 School/College/Work Initiative (SCWI)

For over a decade, government, post-secondary institutions and secondary schools have recognized the need to build a province-wide articulation mechanism focusing on clear routes between secondary schools and community colleges (School-Colleges Project Advisory and Implementation Committee, 1994). Stemming from the Secondary School Reform plan in 1997, the purpose of SCWI has been to encourage a greater proportion of students to select college as a “first choice” for post-secondary study, and to link more secondary school courses to college programs to enable students to make successful transitions to college and employment. Since that time, the SCWI has funded over one hundred projects that focus on providing a seamless transition from secondary school to college (Armstrong, Debiens, and Yeo, 2006). SCWI is a cooperative effort of the Council of Ontario Directors of Education (CODE) and the Committee of College Presidents (COP) and is jointly funded by the ME and MTCU (*ibid.*). In Phase 9 (2005/06) of SCWI, there was full participation by all 24 colleges and 72 school boards.⁸

SCWI activities have focused on increasing awareness of the opportunities offered through college programs, developing and implementing aligned curricula between secondary schools and colleges, and increasing the clarity of high school to college pathways. The focus is on both students who are “disengaged and underachieving with the potential to succeed as well as high achieving students who already have a chosen post-secondary destination in mind” (SCWI

⁸ This information is available at: www.gotocollege.ca.

Team, 2006, p. 3). Pilot projects have been developed that involve schools, colleges, and workplace sectors. Beginning in 2005/06, a key goal and priority for SCWI (Phases 9 and 10) has been to expand participation in dual credit and/or dual program pilot projects to all colleges and boards. Bill 52 (Learning to 18) would allow external learning (e.g., a college course) to be credited towards an OSSD (personal communication, ACAATO, November 2006). The goal is to move from a limited project basis for dual credits and programs in 2006/07 to a broader provincial implementation in 2007/08 (SWCI Team, 2006). Partnerships are also encouraged that provide advanced standing (the granting of a college credit upon admission to college for a secondary school credit course). Thirteen dual credit pilots were funded in 2005/06.

Dual credit courses involve a college credit course team-taught by a secondary school teacher, college teacher, or a certified journeyman (SCWI Team, 2006). Recognition by the college may occur through a credit voucher or may be deferred until the secondary student enrolls in the college. A *dual program* is a program in which a secondary school student is taking secondary school credit courses taught by a secondary school teacher and college credit course taught by a college teacher in the same semester or year. Dual credit models may include Level 1 Apprenticeship training as well as college courses. In 2005-06, 361 students from 36 school boards and 14 colleges across the province were involved in dual credit and dual programs (Armstrong, Debiens, and Yeo, 2006). Regional planning teams received up to \$75,000 each in funding.

Although supportive of the direction taken by government, the colleges raised the concern that many of the projects supported by SCWI funding are “one offs” and sustainability is an issue (ACAATO, 2006b, p. iv). A review of dual credit and dual program initiatives similarly recommended that joint funding by the ME and MTCU should be continued on a sustained rather than pilot basis (Armstrong, Debiens, and Yeo, 2006). In reporting on a range of secondary school/college articulation initiatives including SCWI funded projects, ACAATO (2006b) identified the following issues (p. iv):

- There should be more attention paid to measuring the impact of activities.
- Creating more seamless pathways between schools and college programs requires leadership and support from the two education ministries.

Barriers and disincentives to school/college initiatives are said to include lack of stable funding, policy barriers and labour issues.

4.5 Student Success Strategy

A report entitled “Building Pathways to Success, Grades 7-12” (Ministry of Education, 2003) recommended that more attention be given to developing school-to-work transition programs for students at risk. Since then, the government has introduced a \$1.3 billion multi-year Student Success Strategy to improve student graduation rates. A press release (December 8, 2005) states that the McGuinty government has set a high school graduation target of 85 percent by 2010. The release went on to outline key features of Phase 3 of the Student Success Strategy, as follows:

- Add a new Specialist High-Skills Major to the Ontario Secondary School Diploma that will allow students to complete a minimum bundle of courses in specific high-skills areas such as arts, business, information technology, and construction and manufacturing.
- Introduce legislation that would, if passed, require students to keep learning in a classroom, apprenticeship or workplace training program until age 18 (Learning to 18) or until they graduate (Bill 52).
- Expand cooperative education programs through increased partnerships with business and community organizations.
- Create new dual-credit programs to allow students to earn several credits toward an OSSD through college, apprenticeship and university courses.
- Introduce a new coordinated effort and formal links between high schools and postsecondary destinations to help students reach higher.

Students enrolled in the *High-Skills Major* initiative bundle between 6 and 12 courses in their area of interest to match with post-secondary, apprenticeship or workplace learning requirements.⁹ The idea is loosely based on *Career Academies* in the United States. In Ontario, as part of the first-year pilot phase students can choose to major in Construction, Hospitality and Tourism, Manufacturing, the Arts and Culture, and Primary Industries in Agriculture, Mining, and Forestry Landscaping. The pilot phase involves 27 school boards across the province involving five industry sectors and 15 colleges (personal communication, ME, June 2006). Partnerships in local communities involve federal sector councils, unions, and employer associations. The next phase of implementation may involve additional sectors and additional pilot sites in 2007-08. Students will have opportunities to participate in experiential learning and to earn external credits and industry certification.

School boards, business, and community organizations are involved in programming and the delivery of new options. The ME and MTCU will work together to allow students to earn a number of credits by participating in apprenticeship training and post-secondary courses that count toward their high school diploma and post-secondary diploma or degree (i.e., dual credit). Certain schools within districts may become magnet schools for particular programs. However, programs are intended to have broad appeal for students who plan to go to work, college, or university.

4.6 Ontario Youth Apprenticeship Program

The Ontario Youth Apprenticeship Program (OYAP) is a specialized program that allows students who are 16 years of age or older to meet diploma requirements while participating in an apprenticeable occupation. OYAP students earn cooperative education credits for on-the-job training in this program.

⁹ Information about high skills majors was accessed online October 2006 at:
www.edu.gov.on.ca/eng/6ways/specialist.html

Eligible students must have completed 16 credits toward their high school diploma before starting the program and must be registered as full-time students during the program. OYAP coordinators within school districts help to promote the program to schools and employers. Analysis of participation data has shown that smaller boards are doing significantly better than larger boards (personal communication, Ministry of Education, October 2006). Most districts have developed partnerships with employers, unions, sector councils, employer associations, training delivery agents (colleges, etc.) and in larger centres, some schools have become “magnet schools” for particular programs.

In most cases, OYAP students do not complete their in-school technical training until after high school. However, some programs (for example, automotive and carpentry programs in Toronto) allow students to complete part of this technical training. In total approximately five percent of registered apprentices in 2004/05 completed part of their apprenticeship in-school training while in OYAP (personal communication, Ministry of Education, June 2006). In reporting findings from a survey of colleges in 2005/06, ACAATO identified five examples of colleges that provide technical training for OYAP students (2006a, p. 12). Another ACAATO report (2006b, p. 2) suggests that Heads of Apprenticeship at colleges have raised concerns about secondary schools “over-selling” and “under-delivering” on apprenticeship opportunities in the trades given a lack of industry capacity to take on all those who are interested.

As in other provinces, relatively small numbers of students participate in OYAP – in 2003, 1.6 percent of grade 12 students and .8 percent of fifth-year students participated, and in 2004, 1.9 percent of grade 12 students and 2.7 percent of fifth-year students were enrolled. Participation is approximately two and a half times higher for males than for females (King *et al.*, 2005). Table 7 below provides enrolment numbers between 1998 and 2005. However, it should be noted that unlike Alberta and some other provinces, students are not required to register as apprentices to participate in OYAP. In 2004/05, 3,506 of 19,000 OYAP participants (18 percent) registered as apprentices (personal communication, Ministry of Education, June 2006). For registered apprentices, the five most popular trades in terms of enrolments in 2004/05 were automotive service technician, hairstylist, early childhood educator, carpenter, and cook. King *et al.* (2005) report that approximately 30 percent of grade 12 and fifth-year students who enrolled in OYAP planned to enter apprenticeship programs after graduation. Statistics on the number of students who move from apprenticeship to college or university programs are not available, according to Ministry representatives.

Table 7: OYAP Enrolments, 1998-2004

Year	Enrolments
1998/99	1,500
2000/01	5,900
2002/03	12,700
2004/05	19,000

Source: Ministry of Education (Personal Communication, June 2006)

The Ministry provides funding to support the hiring of an OYAP coordinator within each school district. In 2005/06, additional OYAP funding was provided to the largest school boards based on population. Coordinators are expected to promote the program to secondary schools and to develop partnerships with employers and others. Ontario Learning Partnership Group members also assist in these tasks in most districts.

The Ministry is phasing in performance measures that will require districts to report on outcomes, including the high school completion rate of OYAP students, the graduation rate, and the retention rate in the trade six months after graduation. A student data tracking system is currently being rolled out in which students will have an identification number assigned and they will be tracked from elementary to post-secondary education.

4.7 Links with PSE

While Ontario has made a clear commitment to the provision of applied degrees in colleges and the development of joint/collaborative efforts, there has been little progress on transfer. Even though Ontario is the largest province in Canada with the largest number of students participating in post-secondary education, it has an incoherent and ad hoc approach to transfer. Other Canadian provinces have taken on the challenges and made a consistent effort to establish system-wide credit transfer. In other provinces the government has played an active role in setting public objectives and expectations and establishing the mechanisms to meet the objectives (ACAATO, 2004, p. 8)

The association representing colleges in Ontario thus laments the absence of a clear public policy framework to college and university transfer. While applauding the establishment in 1996 of the College-University Consortium Council (CUCC) as an advisory body to help develop “seamless education pathways,” in their submission to the review of post-secondary education in Ontario (Rae, 2005), ACAATO (2004) suggests that the government needs to consider the development of policy and funding levers that would support and encourage institutions to improve transferability. Writers recommended that the Government establish a new Admission and Transfer Council similar to agencies in British Columbia (BCCAT) and Alberta (ACAT) to improve transfer of credits within the post-secondary sector.

A report on student mobility within Ontario’s post-secondary sector noted that the proportion of college graduates enrolled in university rose from 4.7 percent in 1999/2000 to 8.7 percent in 2004/05 (ACAATO, 2006c). The most common college programs taken by 2004/05 graduates who then went to university were general arts and science, early childhood education, and business administration.

4.8 Conclusion

In recent decades, the Ontario government has promoted the idea that non-university pathways also be valued and recognized and that pathways for students need to be made more transparent. The past ten years has seen a large number of reforms, from a restructuring of the high school program and new curriculum, to a variety of programs which aim to provide clearer routes from

school to college and apprenticeship programs. Some of these programs (e.g., High Skills Majors) are in their infancy and it is therefore difficult to judge success. Other initiatives echo those in other provinces – for example, the Ontario Learning Partnership Group is similar to the CAREERS the Next Generation Foundation in Alberta, while the SCWI is similar to ACE-IT in British Columbia. However, Ontario and New Brunswick are the only two provinces to pass legislation that keeps students in school until age 18; New Brunswick passed legislation in 1999 requiring students to stay in school until age 18 or graduation (deBrouker, 2005) and legislation was passed in Ontario in 2006. Such legislation places significant responsibility on government to provide and coordinate a range of learning and training opportunities for youth and will be important for other provinces to watch.

5.0 Newfoundland and Labrador

5.1 Introduction

Consideration of the economic context in Newfoundland and Labrador is critical to discussion of school-to-work initiatives. In 2005, this region had the highest unemployment rate in the country – 15 percent overall with 8.9 percent in St. John’s and over 22 percent in many rural areas (e.g., 23 percent in the South Coast - Burin Peninsula)¹⁰. Compared to other provinces, Newfoundland and Labrador ranks among the highest in terms of per capita debt, rate of out-migration, and tax burden, and ranks among the lowest in terms of per capita income, birth rate, and fiscal strength (Royal Commission, 2003). Further, in 2005, the provincial unemployment rate for young adults aged 15 to 24 was 21.4 percent (almost double the national rate for this age group).¹¹ In 2000-2001, 94 percent of the province’s “out-migrants” were young adults (Grace, 2005). Reasons for out-migration related primarily to a lack of employment opportunities compared to other regions. Therefore, as authors of the Royal Commission report (2003) note, a key question is: “How do we educate our youth and create opportunities for them to stay?”

A report that tracked youth in fall 2001 after they graduated from high school (Government of Newfoundland and Labrador, 2003a) found that of students who did not pursue PSE, 58 percent were working full-time or part-time, while just over a quarter were unemployed. Interestingly, the “inability to decide on a career path” was cited as a major reason for not pursuing PSE by 42 percent of those who did not pursue it immediately after high school. When graduates were asked about the influence of certain courses and high school activities on their post-secondary decisions, the top-ranked activities were career days/fairs/seminars and career planning sessions with guidance counsellor (*ibid.*). Interestingly, three-quarters of graduates indicated they did not participate in cooperative education, the career information hotline, job shadowing and job mentoring during high school (*ibid.*).

Perhaps as a result of this report and concerns that the industrial arts curriculum in secondary schools had not been updated since the early 1980s, recent efforts have been made to revitalize curriculum and to provide more support for students in their transitions to work. This work is supported by the participation of Newfoundland and Labrador in the development of common curriculum for the Atlantic provinces since 2003. A document that outlines the philosophy, scope and outcomes of technology education curriculum for the Atlantic provinces was produced in 2003 (Government of Newfoundland and Labrador, Department of Education, 2003). Authors suggest a need to move beyond old technology education curriculum to “enable students to work across a broader range of problems and technological systems including communications, production, sensing-control, power-energy, biotechnology and management” (p. 1).

The document emphasizes engaging students in a variety of “hands on activities,” building “knowledge in context,” and making “connections beyond school” (Government of Newfoundland and Labrador, Department of Education, 2003, p. 2). Similar to the direction in other provinces, the emphasis is on a learning environment that includes the community and workplace, physical and virtual space. Partnerships between schools, post-secondary institutions,

¹⁰ Labour force statistics from the 2005 Statistics Canada Labour Force Survey micro datafile provided by CPRN.

¹¹ *Ibid.*

and employers are therefore important. At the same time, the foundation report stresses that achieving curriculum outcomes requires the design of technology education facilities that can accommodate different class activities, structures, and content (*ibid.*). In Newfoundland and Labrador, government funding has been provided to modernize industrial arts facilities in a number of schools in a pilot program.

5.2 Secondary School Curriculum/Program

a) *Course Streams*

High school course streams for core subjects include Basic, Academic, and Advanced levels as well as Advanced Placement and IB courses. The majority of students begin high school in the Academic stream and can move to Advanced or to Basic depending on their grades. As in other provinces, streaming is by course rather than program, and so students may be enrolled in one stream of course for Math, and others for English and Science. Most students taking Advanced courses aspire to enter university while students taking Academic courses may choose university or college. Students in Basic courses are more likely to go directly to the workplace or to one year college programs (personal communication, Department of Education, October, 2006).

AP and IB programs are also available at some schools for high achieving students who aspire to university study. Only one school in Newfoundland and Labrador offers IB programs, but more offer AP courses. In 2005-2006, there were 667 enrolments in AP courses (194 in Math, 12 in Physics, 230 in Psychology, 148 in Sciences, and 83 in Music Theory). There were 293 enrolments in IB courses (100 with English, 43 in Math, 57 in Science, 36 in Social Studies, 57 in Foreign Languages) (Education Statistics, Elementary-Secondary 2005-06, Table 19).¹² These “advanced” course enrolments represent less than one percent (.6 percent) of all enrolments in senior high courses. A unique opportunity for students in advanced placement courses is provided by Gonzaga High School in St. John’s, which provides some students with opportunities to take AP courses in the morning, and complete university courses in the afternoon for credit as part of the school’s STEP Co-op at Memorial University (discussed further below).

b) *Skilled Trades and Technology Courses*

In the late 1990s, an interest in developing Information Technology curriculum led to the introduction of new courses in communication technology and design technology. However, new courses had not been developed in the skilled trades areas, and there was a decline in facilities and course offerings over time. In an effort to encourage more students to stay in school by increasing the relevance of technology curriculum, the provincial government committed \$4 million (\$2.5 million in 2005-06 and \$1.5 million in 2006-07) to piloting a skilled trades and technology program for high school students. The new technology education program includes ten courses developed at a provincial level in areas such as design, communications, computers, integrated systems, woodworking, power mechanics, and home maintenance (Senior High Program of Study, 2006-07, pp. 128-135).¹³ The new program places greater emphasis on work in the skilled trades, and funding is intended to ensure that schools and students have access to up-to-date learning materials, resources, and equipment.

¹² This information was provided by the Department of Education (personal communication, October 2006).

¹³ The Senior High Program of Studies 2006/07 was accessed October 2006 at www.ed.gov.nl.ca.

The skilled trades and technology program was piloted in 30 high schools across the province in the fall of 2006. Pilot schools have been provided with equipment (e.g., each school received approximately \$90,000 in industrial arts equipment) as well as professional development and learning resources for teachers. There are plans to implement this program over three years in all high schools starting in 2008-2009.

In addition to provincial courses, districts can develop technology courses locally. For example, Webmaster, CISCO Networking, Marine Technologies, Media Technology, Flexible Manufacturing and Robotics courses have been developed by districts. Locally developed courses are accepted if they fill a gap in the curriculum and do not significantly overlap other provincially based courses (personal communication, Department of Education, October, 2006). All five districts in Newfoundland and Labrador have participated in the development of local courses.

Like other provinces, recent efforts have also been made to train more technology education teachers. For example, Memorial University (MUN) has a technology education diploma program for pre-service teachers, which graduates approximately 20 teachers each year to try to meet the needs of schools.

In 2005/06, there were 11,587 enrolments in Technology Education courses or 7.5 percent of total enrolments in senior high courses (Education Statistics, Elementary-Secondary, Table 19). Approximately one-third of these enrolments were in Computer Technology, Communications Technology, CISCO Networking and Webmaster. Two-thirds of enrolments in Technology Education courses were male students.

c) Cooperative Education

Increased emphasis on Career Education and on-the-job experiential learning led to the introduction of Cooperative education in 1991, modelled on programs in Ontario, Alberta, and British Columbia. Cooperative education programs expanded in districts across the province, aided initially by federal funding for Cooperative education, and then in 1993, for Youth Internships. However this funding ended in 1998-1999 and the number of schools offering Cooperative Education 1100 (a pre-requisite for other Co-op courses) declined from 49 schools with 1259 students in 1997 to 14 schools serving 266 students in 2005/06. In 1999/2000, 22 percent of schools offered Cooperative education and 5 percent of secondary school students were involved in a workplace experiential learning program (i.e., Cooperative Education, Future Pathways, Apprenticeship Training, Workplace Study) (Career Planning Employment Services, 2006). In 2005/06 there were 727 enrolments in cooperative education, which represents .5 percent of total enrolments in senior high courses (Education Statistics Elementary-Secondary, 2005-06, Table 19). 45 percent of enrolments were male.

Currently, students may earn up to four cooperative education credits of 36 credits required for graduation. Students interested in co-op must take the Level I provincial in-school course that involves 20 hours of pre-employment preparation and 35 hours of integration sessions (Co-op Education 1100) along with locally developed courses developed by school districts that provide on-the-job learning opportunities for their students (Co-op 3220, 2220, or 1120).

Gonzaga High School in St. John's appears to be a leader in co-operative education, offering its students six different options under its Student Transition to Education/Employment Program (STEP): STEP Co-op@ Career Exploration, STEP Co-op@ Apprenticeship, STEP Co-op@ Employment and three other options that are linked to post-secondary educational institutions: STEP Co-op@ MUN, STEP Co-op@ College of the North Atlantic (CNA), and STEP Co-op@ Private Training Institutions. Students' personal interests, abilities, aptitudes, and future career plans determine which program option(s) is selected (personal communication, Gonzaga High School, November 2006). (More information on STEP is provided in section 5.3b, below).

d) Career Development 2201

Career education became a focus of the Department of Education when the high school graduation requirements were being reviewed and updated. The need for a career education/development course was recognized, and Career Development 2201 became a requirement for graduation in 2005. This two-credit course involves three strands related to personal management, career exploration, and career preparation. It is intended to help students develop the skills required to make effective career decisions throughout their lives (Senior High Program of Studies, 2006-07, p. 89). Students are also required to develop an employability skills portfolio that can be used throughout high school and to complete a community contribution component (minimum 30 hours). The community contribution policy was adapted from policy in other Canadian provinces (Career Development 2201, 2006-2007 guidelines)¹⁴ and requires students to complete 30 hours of volunteer activity during the course year. Activities that would normally be performed for wages by a person in the workplace are not to be included, but instead volunteer work with community and service groups, recreation and sports organizations is encouraged.

Some districts and schools emphasize career education in other ways also. For example, Gonzaga High School offers a Career Pathways Program, which focuses on helping students formulate their career aspirations at each grade level.¹⁵ This program includes a combination of occupationally related academic courses, career development activities, the infusion of career development concepts across the curriculum, and the completion of a cooperative education program.

5.3 Local Partnerships

A representative from the Department of Education suggested that school-community partnerships have developed through school councils and through the efforts of individual champions (personal communication, October 2006). Community representation on school councils may foster community partnerships, while other partnerships have developed as a result of cooperative education programs and parental contact. For example, there have been partnerships between the local cable station and schools in St. John's and Gander. Students support the running of the community channel and receive credit for their work in the form of a course. There are also school-community partnerships involving aquaculture in southern Newfoundland, in the skilled trades in Labrador City. Therefore, as in other provinces, partnerships reflect local conditions.

¹⁴ The 2006/07 Guidelines for Career Development 2201 were accessed October 2006 at: www.ed.gov.nl.ca.

¹⁵ See website: www.gonzaga.k12.nf.ca/pathways/coop/about.asp.

a) Career Community Centre, St. John's

Between 2000 and 2003, federal government funding supported the formation and operation of a *Community Career Centre (CCC)* in St. John's, which was a collaborative effort by community groups and organizations to support the career development needs of adults and youth in the community.¹⁶

Although when funding was discontinued in 2003, many CCC activities also ceased, a number of career development initiatives for high school students continued (personal communication, Gonzaga High School, November 2006). Career Planning and Employment Services, a company in St. John's, maintains the CCC web site and continues to support a limited number of programs and services. Some examples of these initiatives include a Job Shadowing Program, Speakers' Bureau, Ask a Person with Experience E-Mail program, Career Development Network-Newfoundland and Labrador, Student Transition to Educational Programs (STEP), Curriculum Enhancement (CE) Program, and the recently piloted (November 2006) Teacher Ambassador Program.

b) Student Transition to Educational Programs (STEP)

STEP is a local initiative – available only in one high school in the province – (Gonzaga in St. John's), that enables students to access university and college courses in their high school years as part of a cooperative education program. For example, in 2004/05 the *STEP* Co-op at Memorial University (MUN) involved 14 students who enrolled in courses at university and cooperative education courses as part of their final year of high school (personal communication, Gonzaga High School, November 2006). Students usually take one or more university courses and participate in 110 hours of experiential learning in the workplace for which they receive cooperative education credits. Students therefore may earn one or more university credits and up to four high school credits. Students in this program must have an average of 85 percent in high school courses to apply for this program and are responsible for paying tuition fees.

Gonzaga High School also offers a *STEP* Co-op at CNA which is similar to *STEP* Co-op at MUN except that academic requirements are linked to the specific entrance requirements of the selected college courses. This program has been operating for four years and nine students were participating in 2006/07. Students participate in college modules in areas such as welding, auto repair, and heavy equipment mechanic to earn college credits and participate in a work placement in a related area to earn high school cooperative education credits (personal communication, Gonzaga High School, November 2006). Students may also participate in a *STEP* program involving private training facilities.

Further, Gonzaga High School is working on a pilot with the Department of Education to bring more experiential learning into high schools. As part of this, efforts are being made to develop a provincial high school apprenticeship program.

c) Curriculum Enhancement Programs

This program operates in the Eastern School District and aims to enhance teaching and learning by developing and sharing instructional units that infuse career development concepts across the K-12 curriculum. The intent is to support students' personal growth and encourage more

¹⁶ See website: www.communitycc.ca

effective career decisions that result in smoother transitions to future employment and learning.¹⁷ This goal is to be achieved by encouraging teachers to work with other community partners (e.g., post-secondary institutions, sector councils, professional associations, trade councils, regional economic development boards) to enhance instructional units by incorporating career development objectives.

The *Teacher Ambassador Program* was introduced in November 2006 as a pilot between Gonzaga High School, the Department of Education, Skills Canada-NL, and other community partners. It involves teachers who are delivering the Career Development 2201 course (described above) to job shadow a journeyperson for a full day and then develop a lesson plan related to this experience (personal communication, Gonzaga High School, November 2006).

5.4 High School Apprenticeship

The province began a pilot high school apprenticeship program in the mid 1980s but the program was not developed further partly because of a downturn in demand for skilled trades workers (personal communication, Department of Education, October, 2006). However, programs in this area are being investigated as part of the Cooperative Education program and the Skilled Trades and Technology program currently being implemented in the school system. As mentioned above, there are also attempts on the part of schools (e.g., Gonzaga High School) to involve students in STEP to Apprenticeship employment and to training at the CNA, which is the main public training delivery agent for the skilled trades.

5.5 Links to PSE

The PSE system in Newfoundland and Labrador includes one university (MUN), CNA, and private training colleges. MUN comprises a campus and Marine Institute in St. John's, Sir William Grenfell College in Corner Brook, and a residential campus in Harlow, England. It is the largest university in the Atlantic provinces (enrolling 13,191 full-time undergraduates and 2,371 graduate students in fall 2004) (Government of Newfoundland and Labrador, 2005). CNA is one of the largest non-university post-secondary education and skills-training institutions in Atlantic Canada. It offers over 70 full-time programs and more than 300 part-time courses at 17 campuses in Newfoundland and Labrador.

A report that tracked youth in fall 2001 after they graduated from high school (Government of Newfoundland and Labrador, 2003) suggests that despite relatively poor economic prospects, youth in this region are highly interested in pursuing post-secondary education. For example, 71 percent of the graduates surveyed were engaged in PSE while another 9 percent had returned to school to upgrade their marks. Further, 93 percent of students not engaged in PSE at the time of the survey planned to pursue it in the future, and one-third of those attending the CNA desired to attain a degree after completing their diploma requirements. In contrast, only 3.1 percent of graduates desired a journeyperson certificate.

Over half of those engaged in PSE were attending MUN and another quarter attended the CNA. Differences in PSE aspirations and attendance were noted for rural and urban students,

¹⁷ For a description of this program, see www.communitycc.ca.

suggesting that geography continues to be a key factor in the post-secondary decisions of graduates.

The 2005 White Paper on Public PSE reported that participants in consultations stressed the need for an integrative approach to PSE that “ensures greater collaboration among the public institutions in the areas of planning, service delivery and sharing of resources and facilities, and allows students to move easily within the system” (Government of Newfoundland and Labrador, 2005, p. 55). It was suggested that programs be integrated, avoid duplication, and provide for transferability.

The White Paper recommended that the Council on Higher Education’s (CHE) role should be enhanced. The CHE was established in 1992 by the government in an effort to improve collaboration with PSE. Its mandate was to provide advice on province-wide policy and planning issues and to develop mechanisms to enhance coordination and transfer of credits among and across sectors of the public education system. An enhanced role for CHE would allow for greater sharing of facilities, initiatives to improve the transition of students from the K-12 system to PSE, and responding to the changing demographics of entrants to PSE (Government of Newfoundland and Labrador, 2005).

Some steps toward improving transferability have already occurred. For example, the 2004/05 Annual Report of the Council on Higher Education notes that CNA offers a college-to-university transfer year program at five campuses with 36 transferable courses. Authors add that of 512 CNA students who transferred to MUN, 222 were from university transfer programs. CNA also allows individuals to demonstrate “*prior learning* (experiential, non-credit and informational) with the aim of receiving credit towards a post-secondary course or program” (Government of Newfoundland and Labrador, 2005, p. 56). The CHE Transfer Guide adds that 321 courses were transferable between MUN, CNA, and the Marine institute and there were 14 block transfer agreements in place (CHE Annual Report, 2004/05, p. 3). In terms of high school transfer, MUN awarded transfer credits to 263 Advanced Placement students and 38 International Baccalaureate students. However, restructuring of the CHE is also seen as necessary to move towards a more integrated PSE system.

5.6 Conclusion

As in other provinces, the government in Newfoundland and Labrador has expressed interest in initiatives that facilitate student transitions from secondary school to further education and work. A key policy concern is to retain educated youth in the province (Government of Newfoundland and Labrador, 2006). Recent policy interventions include new curriculum in the area of trades and technology and a mandated Career Development course which includes a community contribution component. Newfoundland is one of the few (if not the only) province that has not formalized a high school apprenticeship system although models appear to be developing. Perhaps to a greater extent than in other provinces, partnership initiatives appear to be local and ad-hoc and the sustainability of initiatives (such as the Career Community Centre in St. John’s) seems to be tied to federal as well as provincial funding. Therefore ensuring adequate and sustainable funding to school-to-work transition initiatives is arguably an important issue. Another issue in common with other provinces studied in this report is the interest of policy-

makers in increasing the integration of and transferability between post-secondary education institutions in Newfoundland and Labrador.

6.0 Australia

Australia has had a high level of differentiation between general and vocational education but is moving to a less differentiated system through providing vocational education in schools, orienting senior school programs toward the world of work and broadening the scope of VET programs. (Ainley, Malley, and Lamb, 1997)

6.1 Introduction

The next two sections address policy and programs related to school-to-work transitions for youth at the federal level in Australia and in the State of Queensland. In Australia, education is compulsory from ages 6 to 15 years, although the majority of students stay on beyond the compulsory age as many post-school options (employment, unemployment benefits) are not available to them. Students normally commence secondary school at about 12 years of age, and the post-compulsory senior secondary schooling comprises Years 11 and 12. Most secondary schools are comprehensive since secondary-technical (i.e., vocational) schools which previously existed in some states, mainly in Victoria, have long since been phased out (Ainley *et al.*, 1997). Secondary schools in Australia include government, Catholic, and independent (i.e., usually private) schools. In 1996, non-government schools enrolled 34 percent of secondary school students (*ibid.*). The percentage of secondary students remaining to Year 12 rose from 35 to 70 between 1980 and 1993, partly because of policy initiatives taken to improve school completion rates. The increase in school completion rates during the 1980s due to a lack of employment opportunities and changes to welfare eligibility prompted some rethinking of the purposes of the senior secondary years such that more focus on courses of vocational education and training and entry to employment for high school graduates became important (Ainley *et al.*, 1997).

The Australian system of secondary education is similar to the Canadian system in a number of respects. First, education in Australia is not a federal responsibility – States and Territories (analogous to Provinces) have responsibilities for delivery of education and training and school qualifications. However, the federal government provides the bulk of funding for education through tied grants. Second, Australia, like Canada, has been described as having “relatively loosely connected systems of education and employment” (Lamb and McKenzie, 2001). Third, like Canada, the growth in vocational education and training (VET) in schools since the 1990s is attributed to increasing school retention rates, concerns about the employability of school leavers, and concerns about increasing general skill levels in the country (Smith, 2004). Finally, some of the concerns expressed about VET in schools in Australia resonate with issues raised in Canada – for example, resource challenges, shortage of qualified teachers, debates over the quality of training provided by different institutions, low status of programs, and questions about the educational and market value of VET in schools (ANTA, 2004b; Smith, 2004).

But there are also differences. First, there appears to have been greater federal involvement in the VET system in the past decade, and therefore greater federal influence on VET in state schools. The financial control exercised by the Federal government means they are able to lever responses from state government (e.g., to increase programs in vocational education) through the use of tied grants that stipulate certain requirements to be in receipt of funds.

Second, VET in schools are more closely tied to national vocational qualifications, because of the Federal funding control. In 1999, the Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA) stated, “VET in Schools programs are undertaken as part of a student’s senior secondary certificate and provide credit towards a nationally recognized VET qualification” (Australian National Training Authority, 2004a). Students therefore earn credit towards a qualification within the Australian Qualifications Framework (AQF). In the Canadian context, although there has been discussion about using National Occupational Classification codes to organize secondary school technology curriculum and structure career pathways for students (e.g., in Alberta), this is in its infancy. Therefore, “VET in schools” within the Australian context appears to place greater emphasis on credentialing vocational knowledge, and there exists intricate and compelling administrative frameworks for this to occur.

Third, during the “senior phase of learning” (Years 11 and 12) in Australia, young people choose to either stay on in secondary schools or shift to Technical and Further Education (TAFE) colleges or to other Registered Training Organizations (RTO) to pursue vocational education (Smith, 2004). In contrast, the post-compulsory system for young people aged 16 to 18 in Canada is largely confined to the secondary school system since Canadian colleges and technical institutes generally require completion of grade 12 for entry to most programs. Unlike Canada, Australian apprentices typically commence their indenture straight from school. Hence, there is particular interest in assisting the transition between school and the workplace for students in Australia. This has led to school-based apprenticeship arrangements which are discussed below.

6.2 Policy Context

The release of a report by the Australian Committee of TAFE led to the establishment of a national TAFE system in 1974 (Ainley *et al.*, 1997). Since then, TAFE institutes have become the major providers of VET including pre-employment programs, apprenticeships, retraining and updating programs, para-professional liberal adult education and enrol students aged 15 and older (*ibid.*, p. 9). In 1992, the *Australian Vocational Certificate Training System* was established to promote notions of skill formation through the adoption of competency based training and industry derived skill frameworks (*ibid.*). A few years later in 1996, the modern Australian Apprenticeship and Traineeship system (i.e., new apprenticeships) was introduced by the federal government and school-based new apprenticeships were part of this. This system was to be industry-led with training standards directly related to employer needs and employers providing training although access and equity principles were to apply (*ibid.*). Importantly, at that time, the concept of “industry” and industry leadership was a tripartite one involving the representatives of employers, representatives of employees and government (Billett, 2004).

In 1996, Commonwealth funding was approved to enable VET programs to be introduced into schools (ANTA, 2004b). Over time, the federal government has established several agencies focused specifically on VET in schools. For example, the *Australian Student Traineeship Foundation* was set up in 1996 to encourage more work placements for senior school students (Smith, 2004). In 2001, this agency was renamed the *Enterprise and Career Education Foundation* (ECEEF), reflecting increased interest in these areas. In the same year, MCEETYA developed a “Framework for Vocational Education in Schools,” which addressed the need for improved transition pathways for all young people from school to work and further education,

and the need to expand vocational education offerings. The Australian National Training Authority (ANTA) was established in 1992 to provide a national focus for vocational education and training. ECEF was shut down in 2003 and ANTA ended in 2005. Their functions have been amalgamated into the Federal Department of Science, Education, and Training (DEST). At the State level, most education departments set up special units to develop and monitor VET in-schools programs (Smith, 2004).

The growth in VET in schools has been significant since the 1990s. For example, the percentage of senior secondary school students enrolled in VET activities increased from 38 to 50 between 2000 and 2004 (Australian Government, 2005) and nearly every senior secondary school in Australia offers VET programs. The most popular fields (with 58 percent of enrolments) were food, hospitality and personal services; management and commerce; and information technology. VET in schools participants were typically in Years 11 and 12 and the proportions of males and females were generally equal (ANTA, 2004a).

School VET programs are delivered in one of three ways:

- Students work toward the qualification within the school and the school awards the VET qualification if it is accredited as an RTO.
- Students study at school and the school has a partnership with an outside RTO which oversees the quality of training (according to the national qualification framework) and issues the qualification.
- The school purchases training from an RTO (e.g., students work on a VET qualification as part of their course at a local TAFE college or other RTO) (Smith, 2004).

A significant area of growth has been in the provision of VET courses as part of the school curriculum by schools in conjunction with TAFE institutes and/or other VET providers, particularly in Years 11 and 12 (Ainley *et al.*, 1997). These partnerships are reported to provide state and federal agencies with complex funding and counting issues (*ibid.*, p. 38). There is also some rivalry between the sectors – for example, there are differences in funding provided per student head for vocational education courses which may differ across sectors (personal communication, S. Billett, November 2006).

The two main options for undertaking VET in Schools is either through VET subjects/courses (with or without structured workplace learning) or through School-Based New Apprenticeships (SBNA) which also contribute to a senior secondary certificate (ANTA, 2004a). States normally add extra content to the VET qualification to broaden their focus but they do not generally count for university entrance purposes (Smith, 2004).

6.3 VET in Schools Programs

In 2003, the number of students participating in VET in Schools programs was almost three times the number in 1996 (ANTA, 2004a). 202,900 students enrolled in VET subjects or courses as part of the senior secondary certificate. Of these, 65 percent were enrolled in Certificate II

(AQF) and another 18 percent were enrolled in Certificate I (AQF) (ANTA, 2004b).¹⁸ Participation has increased across all states and territories with the highest proportional participation rates for senior secondary students in South Australia (75 percent), Queensland (69 percent) and the Northern Territory (60 percent) (see Table 8 below). Of students participating in VET in schools, just over half (52 percent) engaged in structured workplace learning in 2003 (ANTA, 2004b). Discrepancies in the participation rates of some jurisdictions over others reflect their different policy emphases and program arrangements (ANTA, 2004a). The average hours for students participating in VET in Schools programs were highest in Tasmania (387) followed by Queensland (300) and Victoria (291).

Table 8: Percentage of Senior Secondary Students Participating in VET in Schools Programs by State and Territory, 1999-2003

	New South Wales	Victoria	Queensland	South Australia	West Australia	Tasmania	NT	Australian Capital Territory	Australia (Total)
1999	39.3	13.8	49.4	61.0	20.8	24.5	55.5	48.1	34.6
2000	39.8	19.0	53.6	74.8	21.3	30.5	46.0	45.2	38.0
2001	44.6	21.4	57.0	72.5	29.6	23.7	50.7	43.7	41.3
2002	50.6	24.6	58.6	70.3	30.2	29.3	56.3	43.6	44.3
2003	52.3	27.8	69.0	75.2	31.0	31.8	59.6	42.2	48.3

Source: Australian National Training Authority, 2004a

In 2003, almost 80 percent of VET in Schools program students and 95 percent of school-based apprentices and trainees undertook a training package qualification and the other 20 percent were enrolled in a nationally accredited course or subject (ANTA, 2004a). Training packages, introduced in 1997, are a set of nationally endorsed standards, guidelines and qualifications developed by industry. However, with a shift toward a more conservative government since 1996, what constitutes the voice of industry has also shifted toward employer associations and away from unions (Billett, 2004).

a) School-based New Apprenticeships (SBNA)

SBNAs are part of VET in Schools and started in 1997 as a way for school students to begin apprenticeships or traineeships while still in school (Smith, 2004). Traineeships are a shorter form of apprenticeship often in newer industries or occupational areas. SBNAs represent another option for school students to gain a VET qualification and a senior secondary certificate (ANTA, 2004a). SBNAs differ from VET subjects/courses in that they involve an employment and training contract with an employer and always include structured workplace-based learning as well as classroom work. The most common industry areas for SBNAs in 2001 were sales and personal service, tourism and hospitality, business, primary industry, and automotive (Smith, 2004).

¹⁸ Differences between Certificate Levels I to III are described as follows: Certificate I students are fully supervised and acquire basic practical skills, while Certificate II students are expected to take more responsibility and Certificate III students should be able to apply their knowledge independently in the workplace (Queensland Government, 2002, p. 6). AQF Certificate III roughly equates to the standing of a trade qualification.

The advent of school-based apprenticeships stands as a considerable break with earlier traditions (Billett, 2006). In particular, apprentices were associated with being students within TAFE institutes and schools were largely associated with general education, which reflected the institutional divide. In fact, the majority of school-based apprentices are likely to be in areas which would have been covered previously by the short (year-long) traineeship program, rather than the mainstream trades which require a three or four-year apprenticeship. Nevertheless, there has been a considerable change in views about apprenticeship provisions and the data below indicate growing interest in this form of initial training within the Australian community.

To illustrate this, it is worth noting that there were 12,300 New Apprenticeship commencements (2.9 percent of all secondary school students) in 2003 (ANTA, 2004a). The state with the largest number of SBNAs is Queensland, which has actively promoted them by offering a per capita payment to schools that signed up students to the program (Smith, 2004). This state also has a strong tradition of governmental support for traineeships, through its own departments and agencies. School-based apprentices and trainees commencements represented over 4 percent of all apprentice and trainee commencements in 2003 (ANTA, 2004a). Yet, it is worth noting that over 40 percent of school-based apprentice and trainee commencements were in retail training package qualifications – a sector that has never been recognised as a trade. Although some schools provide off-the-job training, a study of SBNAs in three states found that this training was felt by students to be most effective when taken at a local TAFE college and less effective when taken at school (Smith and Wilson, 2004).

In 2003, slightly more females than males enrolled in SBNAs, 8 percent were Indigenous Australians, and 84 percent were aged 16 and under (ANTA, 2004a) meaning they were either in compulsory education or their first year of post-compulsory education (i.e., Year 11). Data collection on outcomes of SBNAs only began in 2002; however, information suggests that 13 percent of school-based apprentices or trainees had cancelled or withdrawn by the end of December 2003 (ANTA, 2004b).

b) Other Vocational Learning Within Schools

Students in senior secondary schools can also participate in vocational learning options that fall outside the nationally recognized VET framework. These include work experience and work readiness, career education, enterprise education, and community-based projects. *Structured workplace learning* provides “supervised learning activities that contribute to an assessment of competency and achievement of outcomes relevant to the requirements of a training package or accredited national courses that lead to AQF qualifications” (ANTA, 2004b, p. 3). In contrast, *work experience* is unpaid work and/or observation in the workplace, and *work readiness* is a short orientation program (Billett, 2006).

6.4 Outcomes of VET in Schools

A review of vocational programs in schools from 1997 to mid 2003 finds some positive developments (Barnett and Ryan, 2005). For example, authors note that many aspects of VET in Schools policy development in Australia involve the embedding of vocational learning within broader curricula and efforts to develop bridges between vocational and general education. Most states and territories have developed some mechanism for recognizing vocational courses in the

senior secondary credential and for counting the results toward post-secondary entrance. At the same time, these authors raise concerns about the future of vocational programs once federally-sourced seed funding ends given the resource-intensive nature of programs as well as institutional constraints such as the availability of qualified teachers and willing employers.

A second study draws on the Longitudinal Surveys of Australian Youth (LSAY) from 1998 to 2002 to examine the effectiveness of VET in schools (Anlezark, Karmel, and Ong, 2006). Authors report that in contrast to assumptions underlying policy, school VET programs actually had a small negative impact on secondary school retention from Year 10 to Year 12. Participation in school VET programs did have a positive impact on post-school outcomes (i.e., engagement with employment or further learning) in Year 11 for students who did not go on to complete Year 12 but the positive effect was diluted over time and gains were not seen for those who completed Year 12. Further, the fields of education delivered in school VET programs did not articulate well with VET programs offered outside schools and the certifications offered by schools do not have great market value.

7.0 The State of Queensland – by Bonnie Watt-Malcolm and Alison Taylor

7.1 Policy Context

In 2003, Queensland continued to lead Australia in the commencement of school-based apprenticeships and traineeships, with approximately 50 percent of the total new commencements in Australia... Queensland remains the state with the highest number of state school students enrolled in VET in schools since 2002 (Annual Report 2003/04, Queensland Department of Education and Training).

In 2000, the Queensland government set a target to increase completion rates in schools from 68 to 88 percent by the year 2010. Two years later, it released a White Paper entitled “Queensland the Smart State: Education and Training Reforms for the Future (ERTF),” which outlined the future policy direction for education and training. This document recommended providing more vocational options and flexibility for students aged 15 to 17 years (Queensland Government, 2002).

The *Youth Participation in Education and Training Act 2003 (YPET)* supports the implementation of the ERTF by making it mandatory for young people aged 15 to 17 years to participate in some form of education or training after Year 10. From January 1, 2006, young people must stay at school until they turn 16 or complete Year 10 and then must engage in a “compulsory participation phase” until they gain a Senior Certificate, Certificate III (vocational qualification) or turn 17.¹⁹ The YPET sets out the types of options in which a young person can participate, as follows:

1. An education program recognized under the *Education (General Provisions) Act 1989* and offered by a state education facility.
2. An education program recognized under the *Education (Accreditation of Non-State Schools) Act 2001* and offered by a non-state education facility.
3. An education program recognized under the *Higher Education (General Provisions) Act 1993* and offered by a post-secondary education institute (e.g., university or non-university provider).
4. A course recognized under the *Vocational Education, Training and Employment (VETE) Act 2000* and offered by a TAFE institute or RTO.
5. An apprenticeship or traineeship recognized under the *VETE Act 2000* and offered by an RTO.
6. A developmental employment skills-training program provided by the *VETE* chief executive (Queensland Government, 2003).

¹⁹ The main exemptions are if the youth has a paid job for at least 25 hours a week, or has obtained an employment exemption under the *Vocational Education, Training and Employment Act 2000* (see website: www.education.qld.gov.au/etr/faq-leg2.html).

Students typically enrol in a secondary educational facility, usually a high school, which becomes their main learning provider during the senior learning phase. The main provider is responsible for reporting student progress to the Queensland Studies Authority (QSA).²⁰ In the year prior to reaching age 16, students are registered and given a Learning Unique Identifier and establish a learning account with QSA. Learning accounts are records of young people's participation and outcomes, which are converted into credits towards the Queensland Certificate of Education (QCE).

Beginning in 2006, a young person may work toward a QCE (which will replace the Senior Certificate in 2008). The QCE requires students to complete 20 credits in the requisite pattern and meet stipulated literacy and numeracy levels. The QCE is a school-based qualification usually awarded to young people at the end of Year 12. To earn credits, students can currently participate in a broad range of learning, combining school subjects, VET certificates or diplomas, school-based apprenticeships and traineeships, university subjects, awards and certificates, and community, workplace and job readiness programs. Therefore, the QCE will be based on a broader range of learning achievements than a leaving certificate focused largely on gaining entry to tertiary or higher education.

7.2 School initiatives: Pathways from Secondary School to Work or Tertiary Studies

From 2006, each Year 10 student in state schooling will be required to have a *Senior Education and Training Plan* to map out their education and training goals leading to a Senior Certificate or Certificate III vocational qualification for the senior phase of learning.

Students have several training choices in Year 11 and 12 including vocational placements (previously industry placements) that incorporate work experience models as well as School-based Apprenticeships and Traineeships (SAT). Students may acquire one or more certificates, which are assessed on a competency-based model and are documented on their Senior Certificate.

Work experience models include structured work placements, work sampling, work shadowing, research work experience, work education programs, defined as follows:

- *Structured work placements* present students with prospects to experience certain workplace tasks.
- *Work sampling* encourages individuals to explore potential vocational careers and to learn about work.
- *Work shadowing* allows the student to learn more about the people who work in certain industries as well as the work they are typically engaged in.

²⁰ To deliver a training package within a Certificate Level I program, schools must register with QSA or enter into a partnership with an RTO (*ibid.*). The QSA assists schools by recommending training packages to schools to meet the requirements of AQTF Certificate standards and guidelines (QSA, 2006).

- *Research work experience* involves teachers, students, and work experience providers deciding on a topic of inquiry and allowing a student or group of students to assume the role of researchers in the workplace.
- *Work education programs* are designed to help the student learn about and develop appropriate work-related attitudes and skills along with knowledge about the labour market knowledge and the changing nature of work (State of Queensland, Department of Education, Training and the Arts (DETA), 2001).

a) School-based Apprenticeships and Traineeships (SAT)

School-based apprenticeships and traineeships allow high school students – typically in Years 11 and 12 – to work with an employer as paid employees and gain a nationally recognized VET qualification whilst studying for their Senior Certificate. To be eligible for SAT, the student needs to be enrolled in a program of studies that leads towards a Senior Certificate or equivalent, have an employer, a training provider, and parent/guardian and secondary school support (Queensland DETA, 2006). A training contract is signed by the student as well as the employer and the parent/guardian. Unlike other apprentices, school-based apprentices are not paid for the time spent undertaking training delivered by the RTO (*ibid.*). However, students can request credit for past work experience when they start their apprenticeships or traineeships.

If students decide to incorporate VET courses into their secondary school studies, this training can be taught as part of other courses or on its own (Queensland DETA, 2001). Regardless of the delivery agent, courses are documented on the Senior Certificate (*ibid.*). Currently, the majority of VET course are Authority-registered subjects (i.e., locally developed) in a related SAS, as compared with Authority subjects (i.e., issued by government). Authority-registered subjects are included in the Senior Certificate but may not be approved for access to tertiary study (Queensland, QSA, 2006).

Data indicate that in 2003, 4,156 state secondary school students commenced a school-based apprenticeship or traineeship, an increase of 17.6 percent from 2002 (Queensland DETA, 2004). The highest levels of participation are in sales and personal services, tourism and hospitality, and business and clerical. There is also reported to be strong participation in the skill shortage areas of automotive and building construction.

The Queensland Government offers two main incentive programs for employers who take on school-based apprentices and trainees as follows:

First, the “Youth Training Incentives program” funds employers up to \$4,000 for taking on school-based apprentices or trainees. Public sector organizations (including local governments) get incentives for taking on school-based apprentices and trainees throughout the State, and private employers get incentives for employing school-based apprentices or trainees in rural and remote areas of Queensland. Second, the “Strategic Employment Development Program” provides incentives of up to \$2,000 to employers for each additional school-based apprentice employed in automotive, aviation, building and construction, electrical and electronics and metals and engineering.

In addition, the “Vocational Education and Training Disability Support Service” provides support for eligible students with a disability who are undertaking off-the-job training funded by the Queensland Department of Employment and Training.

7.3 Funding for VET in Schools

State funding is allocated for school-based apprenticeships and traineeships, VET in special schools, and certificate courses in order to help schools expand the breadth and depth of their VET in Schools programs (Queensland DETA, 2001). For example, ETRF funding is structured as formula-based cash payments available to state and non-state schools, TAFE institutes, and Australian Agricultural Colleges with Year 11 and 12 students to advance VET coordination and career enhancement (QSA, 2004). Another ETRF funding mechanism is “Access to Pathways.” Under this program (reviewed every three years) grants may be offered to state and non-state schools, TAFE institutes, and other eligible organizations including private training providers, and community agencies and organizations interested in supporting the learning needs of young people (*ibid.*). These organizations may also receive funding to pilot local projects that advance learning for youth in their Senior Phase with the main target group being individuals “at high risk of disengaging from learning” (Queensland DETA, 2001). For the 15 to 17 year old students who integrate VET into their secondary school studies, the state government program funding supports:

- SAT and apprenticeships and traineeships accessed outside of the secondary school system as outlined in User Choice contracts (see below).
- To the first Certificate III or higher credential achieved by students.
- Pre-vocational or pre-apprenticeship programs.

a) **User Choice**

“User Choice” is a program to enable youth and adults to undertake an apprenticeship or traineeship qualification (Queensland Department of Employment and Training (DET), 2006). Although User Choice is a national policy which aims to introduce market concepts into the provision of public services, fund allocations are determined at the state or territory level.

The Queensland User Choice program for the 2006-2009 period is intended to promote the development of “new private provider capabilities in high priority training areas where demand is not being met by current suppliers” (Queensland DET, 2006, p. 6). According to User Choice guidelines, RTOs are responsible for the delivery of approved training and assessment services to eligible apprentices and trainees (*ibid.*). Through User Choice, RTOs can submit requests for funding but the highest priority will be given to apprenticeships, and then to traineeships in an area of skills shortage or government priority (*ibid.*). Training for specific groups (e.g., youth aged 15 to 24) is also covered through the User Choice program; therefore, this funding affects the training programs offered by public training providers such as TAFE institutes and Australian Agricultural colleges. Table 9 below summarizes school-to-work pathways, their funding arrangements, and eligible training delivery agents.

Although reforms require all students to attend school and/or training until they are 17 years old, the Queensland DEA, DET (2006) have also incorporated mechanisms for youth who do not attend school. Pathways and DET funding support for these youth include full-time and part-time apprenticeships, VET qualifications recognized at Certificate I to III or higher, and employment programs (education and work skills, work preparation).

The Queensland government requires schools to report on VET in schools activities according to guidelines established by the School Planning and Accountability Framework (Queensland DETA, 2001).

Table 9: School-to-work Pathways, Funding Arrangements, and Eligible Training Delivery Agents (DEA, DET, 2006)

School-to-work pathways	Descriptions	
	Funding arrangements	Eligible training delivery agents
School-based apprenticeship	<ul style="list-style-type: none"> • Funding provided for all school-based apprenticeships. • Queensland Training Information System (QTIS) publishes the approved apprenticeships. 	<ul style="list-style-type: none"> • User Choice preferred suppliers as arranged by DET, for example, TAFE institutes and other RTOs.
School-based traineeship	<ul style="list-style-type: none"> • Funding provided for all school-based traineeships. • QTIS publishes the approved apprenticeships. 	<ul style="list-style-type: none"> • User Choice preferred suppliers as arranged by DET, for example, TAFE institutes and RTOs.
VET qualifications, nationally recognized, at Certificate Levels I and II	<ul style="list-style-type: none"> • Funding provided to schools at these levels. • DET to fund Certificate Levels I and II as well as unit competencies. • Competencies and qualifications that contribute to at student's Queensland Certificate of Education (Senior Certification) are documented on individual's training plan. 	<ul style="list-style-type: none"> • Secondary schools, TAFE institutes, and Australian Agricultural College.
VET qualifications, nationally recognized, at Certificate Level III or greater	<ul style="list-style-type: none"> • Funding provided by DET for first certificate at these levels. 	<ul style="list-style-type: none"> • Secondary schools, TAFE institutes, and Australian Agricultural College.

7.4 Support for Youth in Secondary Schools

Commonwealth and Queensland state support is available to youth and their schools through programs such as the Youth Support Coordinator Initiative, Local Community Partnerships, Access to Pathways Grants Program, Flexible Learning Services Program, Queensland Community Mentoring Program, and Youth Allowance.

Queensland Government's Department of Communities in conjunction with the education department are collaborating in the *Youth Support Coordinator Initiative*, which "is an early intervention and prevention program aimed at preventing premature withdrawal from formal education and training" (Queensland DET, 2003). As of 2003, this initiative includes state and non-state schools and TAFE institutes where youth support coordinators are hired to help young people successfully work through their secondary education.

Local Community Partnerships (LCPs) "are an initiative of the Australian Government's Department of Education, Science and Technology (DEST) as part of the Career Advice Australia initiative" (Queensland DET, 2001). Of the 215 Australian LCPs, 56 are located in Queensland. According to information for applicants interested in LCP funding (2005), LCPs are intended to implement the following three career and transition programs for youth aged 13 to 19: structured workplace learning, career and transition support, and adopt-a-school.²¹ To receive federal funding, LCPs must be incorporated as not-for-profit organizations that are community based and locally operated and have a management committee with representation from employers and industry, government and non-government schools, and parents and youth. They involve partnerships between industry and employer groups, schools, professional career advisers, community organizations, and parents and youth. Forging and maintaining partnership links is acknowledged to be quite resource intensive for individual schools (Billett and Seddon, 2004).

The *Access to Pathways* grants program was established in response to the ETRF policy with funding of \$11.7 million over 2003-04 to 2005-06. This program is designed to "improve participation, retention and attainment for 15- to 17-year-olds at risk of disengaging from learning" (Queensland DET, 2003). Funding is determined, in part, through collaboration with schools, industry, TAFE organizations, and communities to develop District Youth Achievement Plans. These plans "outline the education, training and employment objectives and priorities for young people in the local area" (*ibid.*).

The *Flexible Learning Services Program* encourages students no longer in the secondary education system to return to school. Funding is used "to purchase education and training services that help re-engage 15- to 17-year-olds" (Queensland DET, 2003). The Queensland Community Mentoring Program, established in 2004, is intended "to improve participation, retention and attainment in learning for 14 to 17 year olds" (*ibid.*, 2003).

Full-time students aged 16 to 24 may be eligible for *Youth Allowance* if they meet the following criteria:

- take an apprenticeship full-time, or
- look for work full-time, undertake approved activities, or have a temporary exemption from the Activity Test (e.g., due to illness), and
- meet residence requirements. (Queensland Department of Human Services, 2006)

²¹ Information for 2005 applicants for Local Community Partnership funding was accessed November 2006 at www.dest.gov.au.

7.5 Conclusion

The following features of the Australian approach to school-to-work transition for youth are noteworthy in comparison with Canadian approaches:

- a) The focus on tying VET in schools courses to a national qualifications framework places a greater emphasis on credentialing vocational knowledge for youth and on recognizing and accrediting different types/forms of learning as part of a school credential (e.g., the QCE), thereby easing their transition to and credits with vocational education programs offered through TAFE.
- b) The range of providers of vocational education and training for 15 to 17 year olds extends beyond secondary schools, including TAFE and private providers.
- c) Formalized traineeships and apprenticeships cover a wide range of industry and occupational sectors, but are differentiated by occupational areas classified as being trade (apprenticeship) or non-trade (traineeship), with the latter being the likely focus of the majority of school-based programs.
- d) The proportion of students engaged in VET in schools appears to be significantly higher than in Canada, although adult apprenticeship is probably higher in Canada.
- e) Monitoring and reporting of VET activities and outcomes and publicly available information appears to be more established as part of accountability requirements for schools.
- f) Equity initiatives (e.g., for students with disabilities and Indigenous youth) are part of the approach.

8. Trends across Canada and Policy Issues

The following trends are apparent in provincial policies related to providing career education and preparing young people for transitions to PSE and work:

- All four provinces have placed increased emphasis on career planning in high school as part of the secondary school program. Some require that students prepare an employability skills or career portfolio.
- Three of four provinces have mandated that secondary school students participate in some form of community involvement for a set number of hours as part of their high school graduation requirements (BC, Ontario, and Newfoundland).
- Three of four provinces have established a high school apprenticeship program (BC, Alberta, Ontario). A small proportion of the high school population participates. This group is mostly male.
- All provinces emphasize the need for local partnerships between schools, post-secondary institutions, and employers. A couple (Ontario and Alberta) have supported “provincial brokers” to help promote partnerships. This is consistent with the trend for governments to stimulate the creation of intermediary bodies as brokers between educational institutions and employers in other OECD countries (OECD, 2000).
- All provincial governments have promoted a decentralized market approach to vocational education and training with varying degrees of intervention in coordinating institutional arrangements. There has been little federal involvement in recent years.
- All provincial governments are interested in increasing the career pathways for students and enhancing flexibility and mobility in learning systems. Some have gone further than others (e.g., BC and Ontario) in providing opportunities for high school students to gain post-secondary credits and/or industry certification. To date, these initiatives involve a small proportion of the high school population.
- All provinces are struggling with the need to constantly update technology curriculum and facilities and to hire qualified teachers.
- Few provinces collect information about program outcomes, and information about enrolments is not readily available or easily comparable across jurisdictions.

The preceding discussion suggests that there are similarities and differences in the approaches taken by provincial governments to facilitate high school students’ transitions to further education and work. In terms of similarities, all provincial governments discussed in this study have expressed a commitment to doing more in the area of school-to-work transition. However, aside from mandated community involvement, only a small proportion of secondary school students is involved in off-campus career-related training. Further, the sustainability of activities is questionable in all jurisdictions given the historically variable funding support both across and within provinces and the piecemeal nature of initiatives. Governments have tended to be reactive in their approach, waiting for locally-developed models to emerge. While this has the advantage

of ensuring that programs are tied to local labour market realities, it is problematic if there is insufficient attention paid provincially to fostering and supporting local partnerships, to ensuring that equal access to similar types of programming is provided across the province, and to ensuring that students who are most likely to face challenges in their transitions are supported (e.g., Aboriginal youth, students from low-income families). Although this is changing slowly, provinces have also given scant attention to collecting data related to initiatives and to evaluating secondary school initiatives programs in terms of longitudinal outcomes for students. It seems reasonable to expect that data related to enrolments (with an emphasis on geographical access and social equity), learning processes, and student outcomes should be more readily available. The contrast with the level of data related to VET that is available in Australia and Queensland is noteworthy.

There are also differences across the provinces described in this report. Governments in British Columbia and Ontario have recently begun to play a more active role in articulating secondary school and college programs. In Newfoundland and Alberta, there is local interest but a lack of provincial coordination to date. Other research suggests that there is a long way to go in better articulating secondary school and apprenticeship training (Taylor, 2006). Provinces vary also in terms of their levels of institutional support for student transfer within the post-secondary education system. Finally, while there is growing awareness of the extent of support and commitment required to foster sustainable partnerships in vocational education and training, there are varying levels of provincial support for this activity across the provinces.

The comparison with Queensland and Australia highlights the lack of federal role in Canada in relation to school-to-work transition. Discussions with policy-makers and local players suggest that federal funding support for initiatives, like provincial support, has been sporadic and short term. Aside from institutional differences related to the provision of education and training for youth aged 15 to 18, Queensland and Australia also tie secondary school curricula more closely to a national system of qualification. In Canada, there has been little emphasis in this area although, as mentioned earlier, BC initiated a pilot project in fall 2006 to test the essential skills competencies of high school students involved in ACE-IT.²²

While more research into the topic of how to better support student transitions is clearly needed, I conclude with some tentative responses to policy relevant questions:

- What role should federal and provincial governments play in terms of partnership facilitation, support/funding, and coordination of high school initiatives? To what extent should initiatives be driven locally? The market approach to VET in Canada has the advantage of responsiveness to local needs and the disadvantage of a lack of central coordination, leading to fragmentation and potential inequities. The work required to develop and sustain effective partnerships is not adequately recognized and local initiatives come and go. While there is a necessary balance between central control and local autonomy, the preceding discussion suggests that governments could play a much more active role in ensuring the sustainability and effectiveness of VET. If it is agreed that successful transitions require solid institutional frameworks (OECD, 2000), then the

²² The “TOWES Times” newsletter discusses this initiative (see www.towes.ca/towestimes/).

development of such frameworks will require greater political commitment and cooperation across levels of government.

- Which group/s should be accountable for the effectiveness of student transitions to further education and work? How should school-based programs be evaluated? As noted, much more could be done to evaluate school-to-work initiatives to ensure that they are accessible, of high quality, and contribute to positive learning outcomes for all students (Taylor and Watt-Malcolm, 2007). Evidence from other countries (OECD, 2000) suggests that employer participation is more prevalent and the quality of school-organized workplace experience programs is higher when supported by appropriate institutional arrangements, rather than left to the individual school or firm. In Canada, governments could arguably play a greater role in defining objectives and setting up a framework for the development of vocational education pathways (de Broucker, 2005).
- What roles should post-secondary institutions and industry play and how can they be encouraged to participate? The focus on providing a mix of pathways with more emphasis on technical and vocational options may ensure that young people have a better chance of finding skilled work. Articulation between secondary and post-secondary institutions is beginning but requires governmental support. In particular, links between vocational education, apprenticeship and tertiary education could be developed further (cf. OECD, 2000). Research also suggests that developing effective and equitable partnerships between educators and employers requires more attention (Taylor, 2006).
- How can students be encouraged to make realistic career decisions without prematurely streaming them or locking them into particular educational and occupational choices? How can governments ensure that initiatives are accessible and equitable? Recognizing that youth have very high educational aspirations and ensuring mobility between pathways to work, college, and university is one step. Collecting socio-demographic data related to student enrolments and outcomes to ensure that programs are inclusive of the diversity of students is also important.
- How to ensure that credentials and certifications provided in formal education have currency in the labour market? There are attempts to provide more opportunities for high school students to attain industry certification and to earn college credits while in high school. Most educators would agree that a balance needs to be struck between providing job-specific training to high school students that will increase their short-term employability and ensuring that they are exposed to general knowledge that will help them to progress in a career and develop as citizens. Further, attention must be given to the outcomes of VET programs that are designed for less successful youth as part of safety nets (cf. OECD, 2000).

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Appendix 1: List of Abbreviations

ACAATO	Association of Colleges of Applied Arts and Technology of Ontario
ACAT	Alberta Council on Admissions and Transfer
ACE-IT	Accelerated Credit Enrolment in Industry Training (BC)
AIT	Apprenticeship and Industry Training (AB)
ANTA	Australian National Training Authority
AP	Advanced Placement
AQF	Australian Qualifications Framework
BCCAT	BC Council on Admissions and Transfer
CALM	Career and Life Management (AB)
CCC	Career Community Centre (NL)
CEU	Credit Enrolment Unit (AB)
CHE	Council on Higher Education (NL)
CNA	College of the North Atlantic (NL)
CTC	Career and Technical Centres (BC)
CTS	Career and Technology Studies (AB)
CUCC	College-University Consortium Council (ON)
DEST	Department of Science, Education, and Training (AUS)
DET	Department of Employment and Training (Queensland)
DETA	Department of Education, Training and the Arts (Queensland)
ELTT	Entry-Level Trades Training (BC)
ETRF	Education and Training Reforms for the Future (Queensland)
IB	International Baccalaureate
IDS	Independent Directed Studies (BC)
IOP	Integrated Occupational Program (AB)
ITA	Industry Training Authority (BC)
ITAC	Industry Training and Apprenticeship Commission (BC)
K & E	Knowledge and Employability (AB)
LCP	Local Community Partnership (Queensland)
MCEETVA	Ministerial Council for Education, Employment, Training and Youth Affairs (AUS)
ME	Ministry of Education (ON)
MTCU	Ministry of Training, Colleges and Universities (ON)
MUN	Memorial University (NL)
NOC	National Occupational Classification codes (Canada)
OLPG	Ontario Learning Partnership Group
OSSD	Ontario Secondary School Diploma
OYAP	Ontario Youth Apprenticeship Program
PSE	post-secondary education
QCE	Queensland Certificate of Education
QSA	Queensland Studies Authority
RAP	Registered Apprenticeship Program (AB)
RTO	Registered Training Organization (AUS)
SAT	School-based Apprenticeships and Traineeships (Queensland)
SBNA	School-Based New Apprenticeships

SCWI	School/College/Work Initiative
SSA	Secondary School Apprenticeship (BC)
STEP	Student Transition to Educational Programs
SWT	school-to-work transition
TAFE	Technical and Further Education (colleges, AUS)
TAP	Teacher-Advisor Program (ON)
VET	vocational education and training
VETE	Vocational Education, Training and Employment Act (Queensland)
YPET	Youth Participation in Education and Training Act (Queensland)
YSC	Youth Support Coordinators (Queensland)

Appendix 2: Summary of Provincial Initiatives

Key initiatives	Province			
	Newfoundland-Labrador	Ontario	Alberta	British Columbia
Secondary school curriculum/program	<ul style="list-style-type: none"> • Skilled trades and technology program (2005-2007 provincial funding) were piloted in fall 2006 and will be implemented in all high schools starting in 2008-2009. Some funding is available to upgrade school facilities and equipment. • Technology courses (as in other provinces) can also be developed locally. Technology courses currently represent approximately 7% of senior high enrolments. More males (2:1) take these courses. • Cooperative education courses were introduced in 1991 but the proportion of students registering is small (slightly more females enrol). • To fulfil high school graduation requirements, students must earn 36 credits including Career Development 2201, engage in 30 hours Community Contribution, and develop an Employability Skills portfolio. 	<ul style="list-style-type: none"> • To attain a high school diploma, students must complete 30 credits, a minimum of 40 hours of Community Involvement, and pass a grade 10 Literacy Test or Course. The Teacher Advisor Program requires students to complete annual education plans. • Learning to 18 legislation will require students to participate in classroom, apprenticeship, or workplace training until age 18. • New high school curriculum and the shift from a 5 year to a 4 year high school program in 1999 have negatively affected high school completion rates. • Optional Technological Education courses are available and accounted for approximately 9% of all high school credits in 2004/05. More males participated in these courses. • Optional cooperative education courses are also available. 17% of students participated (slightly more females) in 2004. 	<ul style="list-style-type: none"> • Knowledge and Employability courses (previously Integrated Occupational Program) lead to a Certificate of Achievement (requiring fewer credits than a high school diploma). Between 4 and 8 percent of the junior/senior high population (majority males) is enrolled. Mobility to other high school or PSE programs is very limited. • Optional Career and Technology Studies (CTS) courses are offered in grades 7 to 12. CTS was phased in 1992-96 to replace practical arts courses. These courses are currently being restructured into 8 occupational clusters based on NOC codes. Courses enrol roughly equal numbers of males and females, and on average students earn 15% of their total high school credits in these courses. • Optional Work Experience courses can be taken by high school students. They can earn 15 of 100 high school credits in these courses. • Students must take a Career and Life Management course in grade 10 for graduation 	<ul style="list-style-type: none"> • Planning 10 is a mandatory career education course for high school students. • Students must complete a Graduation Portfolio and engage in 30 hours of work or volunteer experience as part of graduation requirements. • Applied Academics courses were introduced in 1997 but have not caught on with students or universities • Optional courses in Technical Education and Work Experience are available at the high school level and schools/districts can develop courses locally.

<p>Career programs: Apprenticeship</p>	<ul style="list-style-type: none"> • There is no high school apprenticeship program currently. 	<ul style="list-style-type: none"> • Ontario Youth Apprenticeship Program (OYAP) is available for students 16 years or older. Students can earn high school (cooperative education) credits and work towards an apprenticeship. Students do not have to register as apprentices (18% did in 2004/05) and a small proportion of students (less than 3% of high school students) participates. Most are male. The province provides funding for school districts to hire an OYAP coordinator. 	<ul style="list-style-type: none"> • Registered Apprenticeship Program (RAP) began in 1991 to allow students in grades 10 to 12 to attain high school credits and earn credit towards an apprenticeship. Students can earn 40 of 100 required high school credits in RAP. Most students enrolled are male and less than 1% of high school students participate. 	<ul style="list-style-type: none"> • Secondary School Apprenticeships were introduced in 1995 to allow students 15 years or older to work toward an apprenticeship while earning a high school diploma. Funding is part of core per pupil funding. Accelerated Credit Enrolment in Industry Training (ACE-IT) started in 2005 to allow students to earn high school credits and also gain entry level trades training toward an apprenticeship. Students can be in ACE-IT and SSA at the same time. Additional funding per student is provided to schools at the time of student enrolment and completion of the program and for the work experience component.
<p>Career programs: School-college pathways and partnerships:</p>	<ul style="list-style-type: none"> • Career Community Centre ran 2000-2003 as a collaborative effort by community groups and organizations in St. John's to support the career development needs of adults and youth. Programs include Curriculum Enhancement and Teacher Ambassador. • Gonzaga High School has developed Student Transition to Educational Program (STEP) programs that allow students to earn post-secondary credits while 	<ul style="list-style-type: none"> • SCWI program: increases the clarity of high school-to-college pathways and provides opportunities for dual credit/dual program pilots funded by the province. • High skills majors is a new initiative modelled on US Career academies. • Students can bundle 6 to 12 courses to coincide with post-secondary, apprenticeship, or workplace learning requirements. 	<ul style="list-style-type: none"> • CAREERS the Next Generation started in 1997 with government and private sector funding as a partnership "broker". It coordinates RAP and other work experience programs in areas of skills shortage (e.g., healthcare) and offers workshops for students in schools across the province. • Career Prep (called Tech Prep 1995-2004) promotes school-college pathways by working on articulation agreements with post-secondary institutes and seeking related work 	<ul style="list-style-type: none"> • Career and Technical Centres (CTC) (1990s) are joint initiative with school districts and colleges where students can earn post-secondary certificates and high school diploma requirements in trades and technology sectors

	<p>in high school. Small numbers of students participate.</p>	<ul style="list-style-type: none"> • Passport to Prosperity required all school boards to provide work experience opportunities for high school students. • The Provincial Partnership Council (1999) involves business and community leaders encouraging employers to provide work experience opportunities for high school students. • The Ontario Learning Partnership Group includes members from business and industry education councils and can be described as a partnership “broker.” 	<p>experience placements for students. Modelled on US programs, it combines specific courses, work placement, and career planning. Some funding comes from Alberta Education and from Albert Human Resources and Employment. Small numbers of students participate (mostly in central Alberta)</p>	
Post-secondary links	<ul style="list-style-type: none"> • The Council on Higher Education coordinates transfer among and across public education sector institutions. 	<ul style="list-style-type: none"> • ACAATO would like to see a clearer public policy framework for college-university transfer. 	<ul style="list-style-type: none"> • ACAT governs transfer agreements between colleges and universities and transfer from college to university for students is common. 	<ul style="list-style-type: none"> • BCCAT governs transfer agreements between colleges and universities and transfer from college to university for students is common.

Our Support

Funding for this project was provided by:

- **Work and Learning Knowledge Centre of the Canadian Council on Learning**

Donations:

BCE Inc.

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SNC-Lavalin Group Inc.

Members of the Board of Directors, Campaign Committee and management team

Many *e-network* subscribers and friends of CPRN

Project Funding:

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Home Depot Canada

Loblaw Companies Ltd.

Federal Government Departments, Agencies and Commissions:

Canadian War Museum

Citizenship and Immigration Canada

Council of the Federation Advisory Panel on Fiscal Imbalance

Department of Canadian Heritage

Health Canada

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Privy Council Office

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Provincial Governments:

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- Alberta Education

- Alberta Human Resources and Employment

Ontario

- Ministry of Education

- Ministry of Labour

- Ministry of Training, Colleges and Universities

Saskatchewan

- Ministry of Labour
- Saskatchewan Health

Foundations:

The Bertelsmann Foundation
Canada Millennium Scholarship Foundation
Walter and Duncan Gordon Foundation
Fondation Roaster's Foundation
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Pierre Elliott Trudeau Foundation
RBC Foundation
Vancouver Foundation
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Organisation for Economic Co-operation and Development
Social and Enterprise Development Innovations
University of Alberta
University of Toronto