

**INVESTING IN OUR FUTURE:
INCREASING LABOUR FORCE ACCESS TO SKILLS
DEVELOPMENT TRAINING IN BC**

by

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Abstract

This study investigates labour force access to adult education and skills development programs in BC. The goal of the research is to identify the most effective way for BC's provincial government to increase the skills of the labour force as a means to decrease the impacts of anticipated labour and skills shortages. Using a case study analysis, four policy options are identified, including a Provincial Workplace Training Fund, Training Tax Credits, the 1 Percent Law and Adult Basic Education. Each policy option is subsequently evaluated against selected criteria. Evaluation of the policy options leads to a number of recommendations including the simultaneous implementation of two policy alternatives.

Keywords: Skills development, essential skills, workplace training, adult education, adult literacy training, literacy.

Subject Terms: Adult Education—Case Studies; Organizational learning; Employees—Training of-- Canada; Workplace literacy—Canada; Skills Labour—Canada; Labor Supply; Skilled labor – Supply and demand; Globalization; Employer supported education—Canada; Labour supply- Effect of education on—Canada.

Executive Summary

British Columbia's baby-boomer population has already begun to retire (Finnie et al., 2004). It is anticipated that by 2030 the majority of baby-boomers will have left the labour force, leaving a substantial job and skills gap (Grafstein et al., 2007, Chapter 2). The impact of the retirement of the baby-boomer generation is not expected to be alleviated by smaller emerging labour force cohorts. Simultaneously, global demand for skilled workers continues to increase as technology is quickly defining the new information economy. As a result of increased global demand for skilled workers, BC's inter-provincial migration and international immigration are an insufficient solution to looming skill shortages. To diminish the negative effects of a skill shortage fuelled by demographic and technology changes BC's labour force needs to develop the skills necessary to adapt.

Policy Problem

The policy problem central to this study is that the labour force faces a number of challenges in accessing skills development programs. Labour force participants may be reluctant to pursue formal skill development training, currently offered through BC's university and college systems, because of high opportunity costs (lost wages, child care, transportation etc.). To increase access to skills development training the current study attempts to answer the policy question- what policy options can the provincial government use to make skill development programs more accessible to individuals in the BC labour force?

Methodology and Recommendations

I examine three case studies to determine the structural and operational elements essential to enhance the accessibility of skills development programs. The three Canadian case studies are

from Nova Scotia, the Provincial Workplace Training Fund, Quebec, the 1 Percent Law, and British Columbia, Training Tax Credit. Examination of the case studies and empirical research shows that labour force access to skills development training is increased when training is offered in the workplace. The policy options assessed are:

- Status Quo: this option, to continue the Adult Basic Education program, is used as a benchmark from which to compare the other policy alternatives.
- Extended Training Tax Credit: this second option maintains all features of the current Training Tax Credit program but increases industry access to the credit to non-trade-based industries.
- Provincial Workplace Training Fund: this third option requires the creation of a central provincial fund to supply financial support for small businesses wanting to develop a workplace training program. This option also requires the creation of additional provincial and regional infrastructure to support and monitor program progress.
- 1 Percent Law: this last option mandates a minimum employer investment in workplace training programs.

To analyze how well each option performs with respect to increasing labour force access to skills development training, the following criteria are used: budgetary cost, administrative ease, effectiveness and political feasibility. Based on this assessment, this study recommends that the BC provincial government consider simultaneously implementing the 1 Percent Law and the Provincial Workplace Training Fund while maintaining the current Training Tax Credit and Adult Basic Education programs.

Dedication

For all who
inspire me in life.

To my Mom, without your unconditional love and support this would have never been possible. Thank you for believing in me! I can never express the wholeness of my gratitude.

To Dan, my love, for giving me the strength and motivation to persevere and succeed.

To the Girls, each of you should share in this accomplishment!

Without your friendship I would not be who I am today.

I look forward to celebrating all of our accomplishments together as the years go by.

To Tara and Ian for helping me keep everything in perspective!

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I would like to thank Literacy BC, for without their support this project would not have been possible. For the past year Literacy BC's invaluable and inspirational staff have introduced me to the world of literacy and have revealed to me the importance of literacy as it has the power to effect every aspect of each individual's life, for better or worse. I am indebted to Cynthia Whitaker and Diana Twiss for giving me the opportunity to work with Literacy BC in support of literacy practitioners and learners throughout the province. I am also extremely grateful for the guidance and knowledge shared with me by the other Literacy BC staff members: Deb Monkman, Emily Hunter, Nancy Richardson, Tammy Gladue, Marj Froemgen, Judy Finch, Doreen MacLean and Sandy Middleton - THANK YOU!

I would also like to express my eternal gratitude to my advisor Nancy Olewiler for her support, insight, patience and understanding. I would also like to thank Nancy for her personal support and guidance as I worked through difficult times, trials and tribulations. Nancy really went beyond the call of duty to guide me through this process.

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Acronyms

ABE	Adult Basic Education
AED	British Columbia Adult Education Diploma
AET	Department of Advanced Education and Training
AETS	Adult Education and Training Survey
ALL	Adult Literacy and Life Skills Survey
ALMD	Ministry of Advanced Education and Labour Market Development
AWENS	Association of Workplace Educators of Nova Scotia
BCBC	British Columbia Business Council
DLWD	Department of Labour and Workforce Development
EFO	Education Field Officers
IALS	International Adult Literacy Survey
ITA	Industry Training Authority
NSPWE	Nova Scotia Partners for Workplace Education
MOE	Ministry of Education
RLC	Regional Literacy Coordinator
RWLC	Regional Workplace Literacy Coordinator
SLS	Southam Literacy Survey

TTC	Training Tax Credit
OECD	Organization for Economic Co-operation and Development
WEI	Workplace Education Initiative

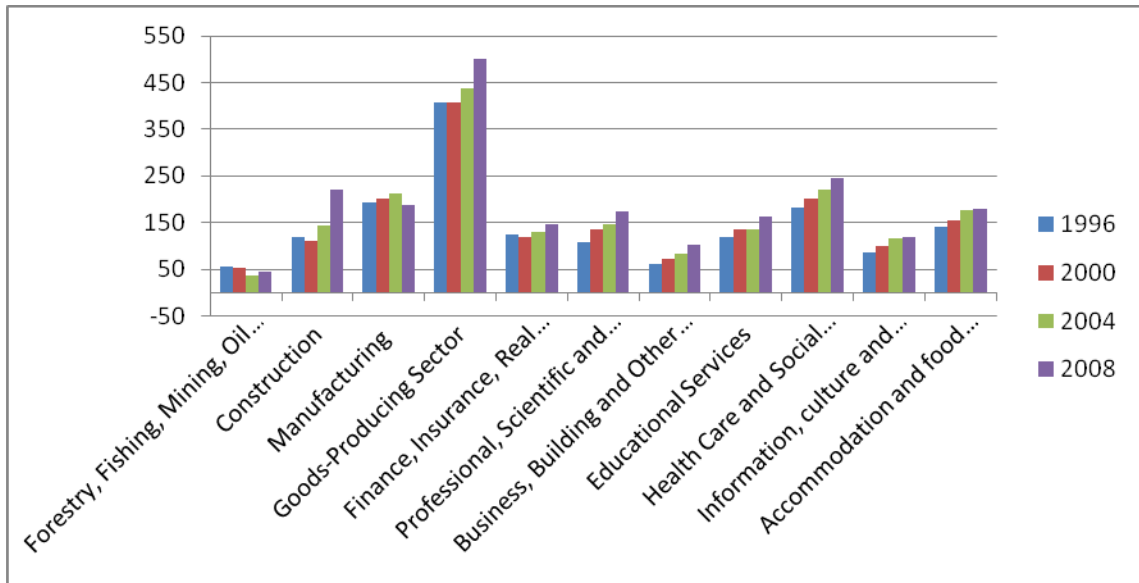
Chapter 1: Introduction

British Columbia (BC) is experiencing growth in a variety of sectors specifically, service, construction, goods production and health care. Simultaneously, historically strong industries such as forestry, fishing and manufacturing are in decline (see Figure 1.1). The BC Chamber of Commerce, the BC Business Council, the Canadian Federation of Independent Business, Canada West Foundation, and the BC Federation of Labour all agree that BC will inevitably face a growing skills shortage in the absence of policy change (Annis et al., 2005). A skills shortage exists when employers cannot find an individual with the skills they require amongst the existing labour force (Bourgeois et al., 2006). A skills shortage is different from a labour shortage, as a labour shortage occurs when there are not enough people in the labour force, including under-qualified individuals, to fill employer demands (Bourgeois et al., 2006).

In the BC Chamber of Commerce's 2002 report *Closing the Skills Gap*, "the degree to which skills shortages are averted by stakeholders will be a large determinant of BC's economic prosperity and social health" (BC Chamber of Commerce, 2002, p.V). A subsequent Chamber of Commerce report released six years later (2008), found that, "the skill shortage challenge has become more acute due to the aging of BC's workforce, declining birth rates and global competition," concluding that without action it is unlikely that the skill shortage will mend itself (BC Chamber of Commerce, 2008). A more detailed discussion of demographic trends will occur in Chapter 2 of this study.

Figure 1.1 BC's Employment Industry

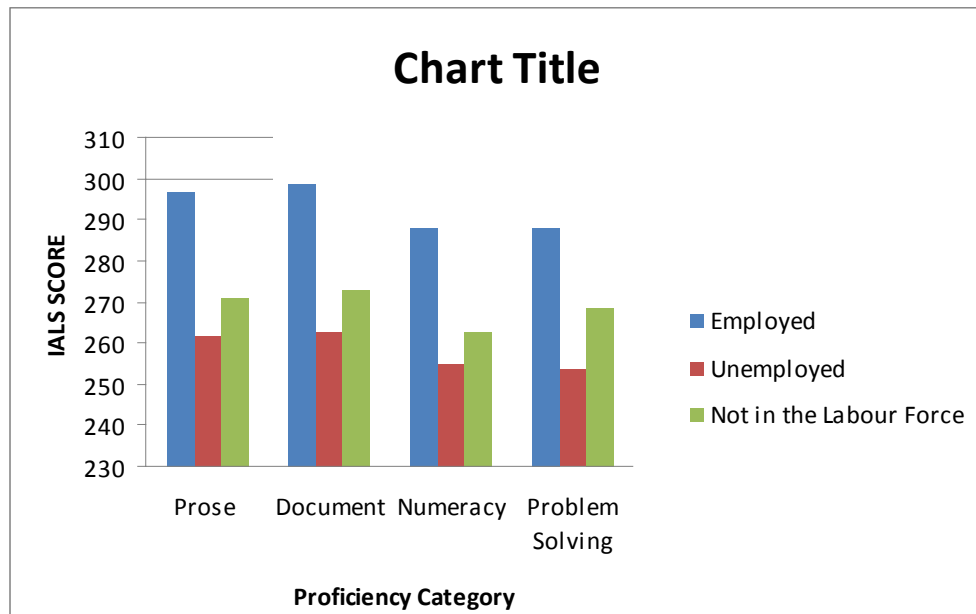
Source: Statistics Canada, Labour Force Survey, 2009



It is important to address the skills shortage issues, as 40 percent of British Columbians over the age of 17 do not have the skills necessary “to understand and use information contained in the increasingly difficult texts and tasks that characterize the emerging knowledge social and information economy” (Ministry of Advanced Education and Labour Market Development, 2003, p. 13). Not surprisingly, those with low educational attainment levels (less than high school) received substantially lower scores than their more educated peers (Ministry of Advanced Education and Labour Market Development, 2003). Non-high school graduates on average performed substantially lower in the document literacy category than those who have completed high school (see Figure 1.2) (Ministry of Advanced Education and Labour Market Development, 2003). Results also reveal “a clear relationship between literacy proficiency and employability,” as 71 percent of employed individuals surveyed had document literacy scores higher than level three (Finnie et al. 2007, p. 5).

Figure 1.2 Average IALS proficiency scores, by labour force status, British Columbia, population aged 17 to 65, 2003

Adapted from: *Building our Competencies: British Columbia Results of the International Adult Literacy and Skills Survey,* 2005



The recent economic downturn, initiated by the US sub-prime mortgage crisis, may temporarily decrease demand for skilled labour reducing the perceived impacts of a skills shortage. However, when BC’s economy recovers, the competition for highly skilled employees is likely to be greater than ever:

“Employers and employees, consumers and taxpayers must all prepare for economy wide labour supply challenges, and pronounced shortages in many sectors, in the medium and long term: the current slowdown in the global economy will simply permit near term postponement of dealing with some of those challenges” (British Columbia Chamber of Commerce, 2002, p. 3).

To deal with anticipated skills shortages BC needs to find ways of developing all of its potential human resources.

1.1 The Policy Problem

Improving and maintaining the skills of BC workers is essential to ensure the continued growth of BC’s economy. An ageing workforce along with decreases in immigration and net

migration mean that BC's success (as measured by per-capita GDP growth) will be highly dependent upon the skills and adaptability of its existing labour force (Krahn et al, 1999). To sustain BC's current provincial GDP per capita, the smaller youth labour cohort will have to be more productive, effective and efficient than their predecessors. Monitoring per capita GDP growth is more likely to reveal changes in productivity than measuring provincial GDP growth which is more likely to be affected by increases or decreases in immigration and migration (immigration and migration patterns are discussed in more detail in Chapter 2).

To enhance the skills of BC's adult population, the BC government's current policies include Adult Basic Education (ABE) and an apprenticeship Training Tax Credit (TTC). ABE off-site formal learning programs are tuition free and available to any adult BC resident that wants to enrol. Although there is no program tuition, opportunity and other financial costs act as barriers to enrolment. The largest barrier to enrolment is the potential loss of employment, as employees are commonly required to choose between their education and career. Often the financial responsibilities of daily life leave employees with little choice but to continue in their current position.

The high opportunity costs of attending formal off-site learning remains a substantial barrier to adult participation in existing ABE programs. According to the *2005 ABE Survey*, 24 percent of students faced financial hardship while enrolled in the program, and were forced to cut back on their monthly expenses or seek financial support from friends and family (Ministry of Advanced Education and Labour Market Development, 2005). This survey considers only those who enrolled in an ABE program or course as it seeks to reveal why students do not complete. The survey does not include respondents that chose not to enrol, and as such, it is not possible to determine all of the barriers to pursuing this form of skills development training.

The apprenticeship TTC is fundamentally different from the ABE program as it provides an incentive to employers encouraging investment in in-house workplace training programs.

There are fewer barriers to participation in in-house training than formal off-site programs. In-house training programs eliminate the largest barrier to skill development, as they allow employees to learn while they earn. Through the TTC program, apprenticeship wages are subsidized, decreasing employer-training costs and increasing accessibility to skills development training. Although the TTC has increased the employer sponsorship of workplace training programs, and apprenticeship enrolment, it is only available to those working in the trades-based industries recognized by the Industry Training Authority (the list of recognized trades can be found in Appendix 1). Employers operating in non-trade based industries such as hospitality, business and finance and manufacturing do not receive any government incentives to invest in in-house skills development training. It is expected that as the skills shortage increases as a result of industry and population changes, all industries will soon be affected by the skills shortage (British Columbia Chamber of Commerce et al., 2009).

This paper examines ways to enhance the accessibility of skills development programs by comparing adult education and workplace training policies implemented in Nova Scotia, Quebec and British Columbia to determine: **How can the provincial government make skill development programs more accessible to individuals in the BC labour force?** The following section describes the organization of this study.

1.2 Organization of the Study

Chapter 2 begins with a review of the literature and empirical studies that have examined the benefits of developing essential skills. I then describe the essential skills levels of BCs population as measured by the International Adult Literacy Survey (IALS) and Canada's Adult Literacy and Life Skills Survey (ALL). In this section, I also describe population demographic realities contributing to an anticipated skills shortage. Chapter 3 describes the policy alternatives through the presentation of case studies and describes adult education and workplace training policies in Nova Scotia, Quebec and British Columbia in detail. Chapter 4 evaluates the case

studies based on four explanatory variables determined essential to implementing effective adult education policy.

In Chapter 5, I identify and define four criteria and the measures used to evaluate the policy options: budgetary costs, administrative feasibility, political feasibility and effectiveness. Chapter 6 then uses the four criteria to evaluate the feasibility and effectiveness of the policy alternatives. Chapter 8 makes recommendations to the BC government based on the evaluation of the policy alternatives. The final section, Chapter 9 includes concluding remarks.

Chapter 2: Background

2.1 Population Demographics

According to the Business Council of British Columbia, “the biggest factor determining the composition and growth of the workforce is the structure of the population” (Finlayson, 2006, 2). According to a variety of reports, BC’s current skills shortage is not cyclical, rather it is “fundamental and structural in nature...owing to a new economic reality” (BC Skills Force Initiative, 2005). This new economic reality is the result of technological change, rapid growth, and demographic change.

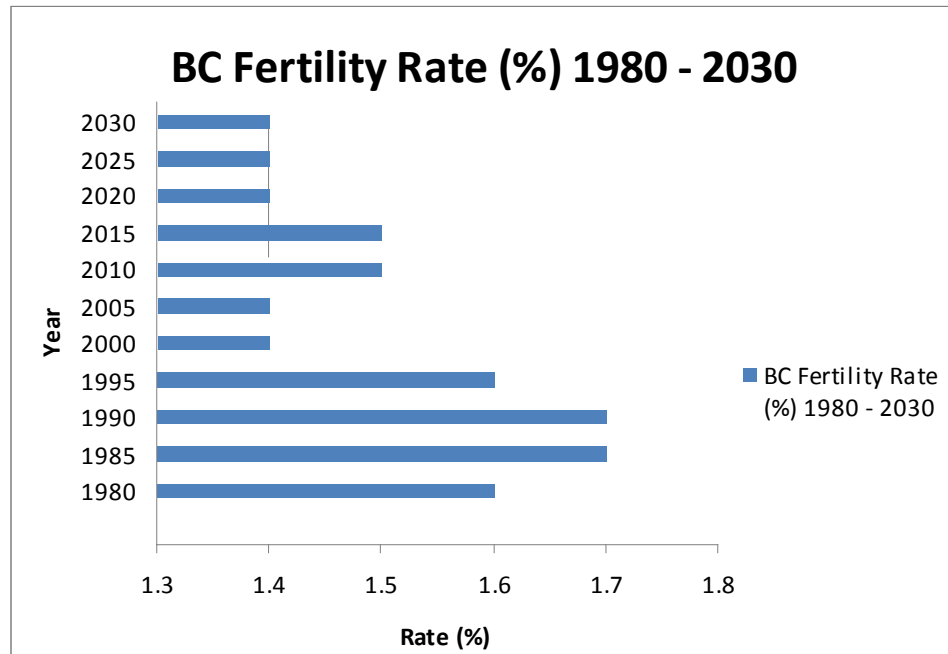
Three factors determine demographic change for a country: fertility rate, mortality rate and net immigration (Grafstein et al., 2006). Changes in these three factors are contributing to the looming “demographic bomb,” compounding BC’s skills shortage (British Columbia Chamber of Commerce et al., 2005, 1). BC currently relies upon a large middle-aged cohort, immigration and migration to fill its skilled labour force needs (BC Stats, 2007). The population of younger cohorts is too small to fill positions generated from labour market growth and retirement vacancies.

Fertility

Fertility rates in British Columbia have been steadily decreasing over the past two decades (See figure 2.2). In 2007, there were 1420 babies born to every thousand women (15-49 years old) in British Columbia (BC Stats, 2007), translating into a fertility rate of 1.42. Without increasing BC’s fertility rate to 2.1 (the ideal level for population replacement), it will be almost impossible to avoid long-term population loss without offsetting in-migration (Grafstein et al., 2006, Chapter 2). Smaller youth cohorts resulting from decreases in fertility will not alleviate the

skills and labour burden placed upon society when the majority of baby boomers reach retirement age. According to the McKinsey Global Institute, “across the globe...falling birth rates and lengthening life spans are causing populations to age rapidly...ageing and its implications are emerging as major social, political and economic issues” (Grafstein et al., 2006, Chapter 2).

Figure 2.1 BC Fertility Rate Predictions 1980-2030
Adapted from Source: BC Statistics, 2008

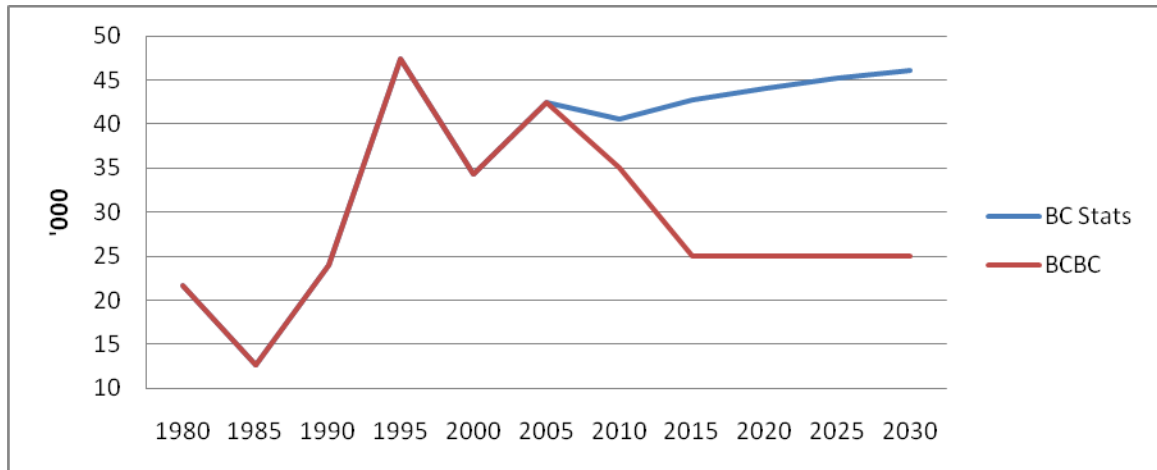


Immigration and Migration

As a skills shortage continues to affect most OECD countries “it will become harder for Canada to lure immigrants, with the needed skills, at a time when so many other nations are trying to do the same thing” (Grafstein et al., 2006, Chapter 3). Since 1981, BC has had between 12,000 and 50,000 annual international immigrants move into the province. Although BC’s official statistics have predicted a steady increase in immigration, the BC Business Council (BCBC) estimates that international immigration to BC will plateau at 25,000, due to increased competition for skilled immigrants (see Figure 2.2) (Finlayson, 2006).

Figure 2.2 BC's Net International Immigration 1980-2030 ('000)

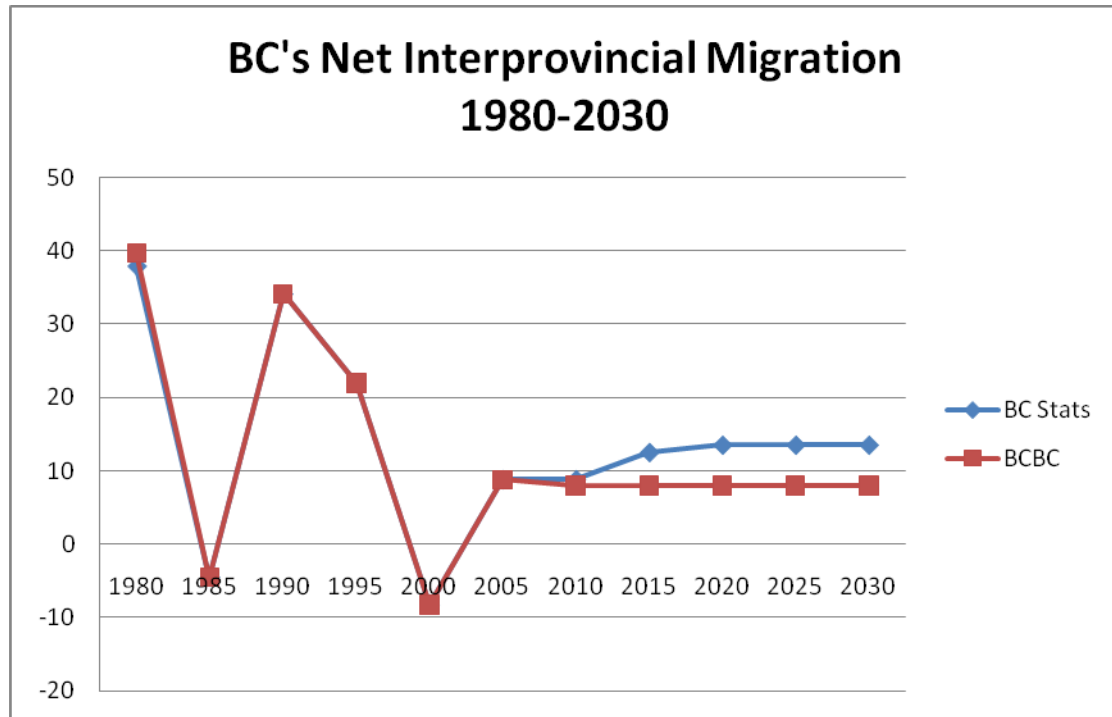
Adapted from: BC Business Council Immigration Forecast Data, (Finlayson,2006)



Interprovincial migration has also varied considerably since 1981, with net migration ranging from 40,000 to a net loss of 10,000 individuals (See Figure 2.3). Migration is particularly important to provinces experiencing a skill or labour shortage as “most interprovincial migrants are working age individuals, so shifts in net interprovincial flows can have significant effects on the labour force” (BC Business Council, 2006). According to BC Stats, interprovincial migration will plateau around 12,000 individuals, however, the BC Business Council disagrees, estimates that BC interprovincial migration will “flatten out around 8,000 per year” (Business Council of British Columbia, 2006). The conflicting and greatly divergent immigration and migration predictions made by BC Stats and the BCBC make depending on immigration and migration for BC’s future labour supply risky.

Figure 2.3 BC's Net Interprovincial Migration 1980-2030 ('000)

Adapted from: BC Business Council Immigration Forecast Data, 2006

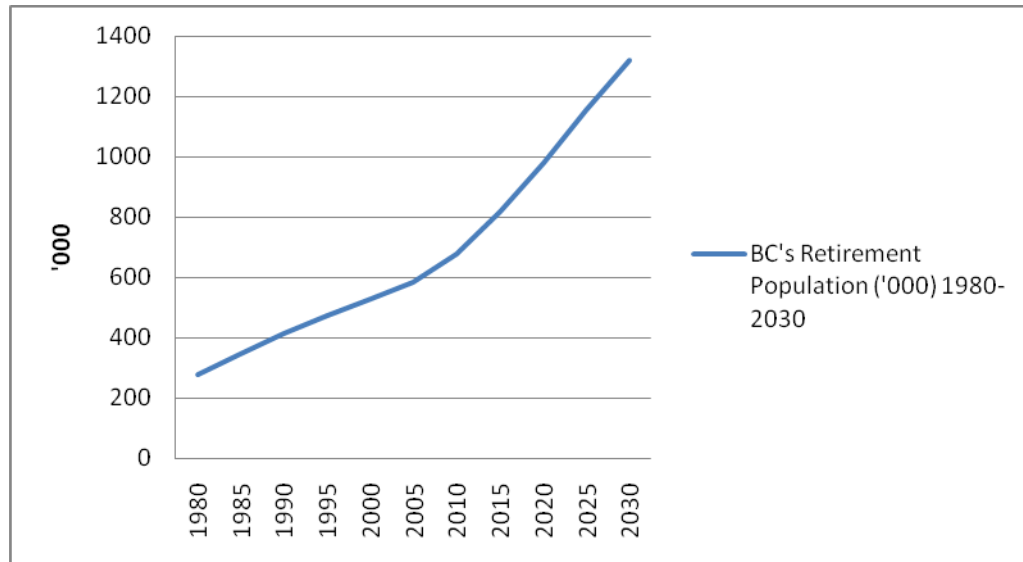


The Retirement Bomb

Individuals born between 1946 and 1966 are part of the “Baby Boomer” generation. Considering a median retirement age of 61, baby boomers began to retire in 2007 (Perspectives on Labour and Income, 2004). According to the Chief Actuary of Canada, “by 2030 most baby boomers will have retired” (Grafstein et al., 2007, Chapter 2) (see Figure 2.4). BC Stats (2009) similarly predicts that by 2030 there will be 40 retirees for every 100 individuals of working age (15- 65 years old).

Figure 2.4 Retirement Population Estimates 1980-2030

Adapted from: Grafstein et al., 2007



Presently, baby boomers make up the largest cohort in the labour force, and it remains largely uncontested that “the retirement of this generation will have significant labour market consequences” (Grafstein et al., 2007, Chapter 2). As the percentage of the population retiring increases, so do the vacancies in the labour force, and these vacated positions have historically been filled by younger cohorts. However, low fertility rates in combination with reduced or constant levels of immigration will decrease the size of the replacement labour force: “changes in the relative size of the working-age and non-working age populations will have implications for economic growth, federal finances and spending, and financial and labour markets, as well as for many other areas” (Grafstein et al., 2007, Chapter 2).

With the retirement the baby boomers that make up such a large portion of the labour force, employers are losing more than the skilled labour those workers provide, they also lose the valuable mentorship that older workers provide to younger generations. According to the New Approach for Lifelong Learning (2007) developed by the Social Science and Humanities Research Council, younger workers acquire job-related knowledge primarily through informal mentoring by older workers (p.32). The removal of this forum for mentorship may have vast

implications for the skills of future generations. D.W. Livingstone describes the contribution of older worker mentorship as “the submerged part of the adult learning iceberg: not usually seen, but essential to supporting the visible part” (Livingstone, 2008, p.7).

Chapter 3: Case Studies

The methodology used in this study has one chief component: a multi-case analysis informed by extensive research and literature input. The multi-case analysis examines three provinces that use different mechanisms designed to increase investment and participation in workplace literacy. The cases are Nova Scotia, Quebec and British Columbia. The goal of this analysis is to identify policies that will increase access to adult education and skills development programs.

I begin each study by reviewing the evolution of adult education and workplace training policies independent of each other, then go on to discuss in the cases of Quebec and Nova Scotia how these two policy streams eventually combine. Adult Education and workplace training remain, for the most part, separate policy streams. As British Columbia's adult education policy continues to evolve, the practical evolution of adult education policies in Quebec and Nova Scotia are important to consider. As the following section will reveal, BC's current separation of adult education and workplace training policies works to maintain barriers to enrolment in skills development programs.

3.1 Case Selection

The evaluation of information-oriented paradigmatic cases provides feasible examples and outcomes relevant to BC (Flyvbjerg, 2006). The cases chosen provide four examples of adult education and workplace training policies implemented by three Canadian provinces. The paradigmatic cases selected for evaluation include:

- “1 Percent Law” policy, Quebec

- requires mandatory employer investment in workplace training and is economically self-sufficient
- Provincial Regional Workplace Training Fund, Nova Scotia
 - Requires business and government cost sharing
 - Provides financial assistance to employers
- Adult Basic Education, British Columbia,
 - Requires substantial government funding
 - Provides ABE tuition free to BC adult residents
- Training Tax Credit, British Columbia
 - Requires business, government, and apprentice cost sharing
 - Provides a financial incentive to employers to invest in skills development and workplace training

Firstly, all of the chosen cases represent examples of Canadian adult education and workplace training policies. Using dissimilar policy approaches, each province hopes to attain a similar policy outcome: increased labour force access to skills development and training programs. Evaluation of the cases can reveal potential challenges to policy implementation, and can predict outcomes.

The specific experiences of Nova Scotia and Quebec are of particular interest to BC policy makers, as they share several integral commonalities. Nova Scotia, Quebec and BC all have a very high percentage of small businesses (~98%) in the total number of business entities in each province. Small businesses experience higher fixed training costs than their larger peers and therefore are less likely to invest in workplace training. For small businesses, investment in workplace training may represent a large financial gamble.

Small business employers that invest in their employees are often concerned with a phenomenon called poaching, defined as: “the conscious action of employers to seek out and hire other employers’ employees for their skills so they can gain productivity benefits without incurring the costs of developing those skills themselves” (Campbell et al.,2001, p.21). Small businesses that do invest in enhancing the skills of their employees run the risk that their newly trained employee will use their new skills to increase their personal career opportunities and seek employment elsewhere. Employees that receive broad based training such as essential skills training, are a primary target of would be poachers (Campbell et al., 2001). Although the prevalence of poaching in Canada has not been determined, it is the common perception of employees being “poached” after training that deters employers from investing in workplace essential skills programs. To increase employer investment in workplace training, provinces with a large proportion of small businesses must consider barriers specific to small business investment.

In addition, Quebec and Nova Scotia’s workplace training policies have evolved from two historically separate policy streams, adult education and industry training. Quebec and Nova Scotia’s current workplace training policies combine adult education and workplace training, decreasing the opportunity costs of leaning. Presently, BC’s adult education and workplace training policies are independent entities. BC’s adult education policy focuses on formal ABE programs available through the college and university system, and training tax credits for specific industries only.

The following section divides each case into four sections. The first section of each case study will provide a summary of adult education policy, discussing the catalysts for policy change. The second section then discusses the emergence of workplace training policies, and in the case of Quebec and Nova Scotia, how they were combined with adult education policies to interdependent goals. The third section describes the actors that fund the program. The final

section presents the outcomes of each policy had based on the measurement criteria identified by each province.

3.2 Case 1: Nova Scotia

Adult Education Policies

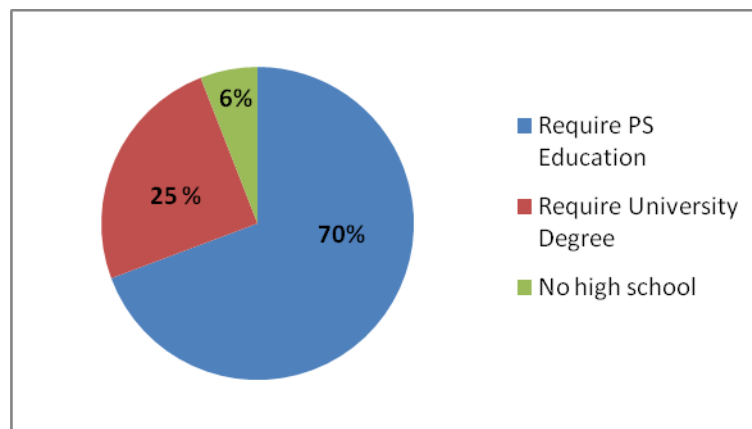
Historically, three main bodies supported adult literacy in Nova Scotia –school boards, community program providers and the non-profit community organization, Laubach Literacy (Darville, 1992). Results from the 1987 Southam Literacy Survey (SLS) are considered the catalyst for change in Nova Scotia’s adult education policy. According to the SLS, “38 per cent of Canadian adults have problems with reading and writing” (Plett, 2007, p.22). In 1988, Nova Scotia established a Literacy Section within the Department of Advanced Education and Training (AET) (Godin, 1996). The Literacy Section of the AET department delegated responsibility for adult literacy and education to the seven provincial community colleges. Each college had a regional literacy coordinator assigned who was responsible for developing adult literacy materials, promoting college and community programs, connecting local programs, training tutors and establishing new programs (Darville, 1992).

The year 1995 marked more changes to adult literacy infrastructure in Nova Scotia, as the Department of Advanced Education and Training was restructured and the Literacy Section was transformed into the Adult Education Section in the Department of Education and Culture, Learning and Innovation Division. With a new title and department came new partners and responsibilities. The Adult Education Section coordinated and financed agencies dedicated to delivering adult literacy and upgrading programs (Godin, 1996). Program delivery relied on a strong partnership between organizations, labour, business, industry, institutions and the community.

Education policy in Nova Scotia continued to evolve as an adult literacy framework transformed into a skills framework, with the release of Skills Nova Scotia action plan in 2002. Although Nova Scotia had high graduation rates, and post-secondary participation “a number of labour force and education challenges hinder the development of a well-balanced, skilled and knowledgeable labour force” (Skills Nova Scotia, 2008). Like most Canadian provinces, Nova Scotia has an ageing population, and education is becoming even more vital to employment success (See Figure 3.1). To prepare workers in Nova Scotia for the future educational requirements, Skills Nova Scotia called for the addition of a Skills and Learning Branch within the Department of Education. The Skills and Learning Branch specifically addresses workplace learning, labour market information, adult basic education, apprenticeship training, research and policy (Skills Nova Scotia, 2008).

Figure 3.1 2004 Projected Education Requirements Rates (%)

Adapted from: *Programs in the Workplace: How to Increase Employer Support* (Plett, 2007)



From the WEI to Skills Nova Scotia

The Nova Scotia government began to recognize the connection between a low level of literacy and employable skills and the impact on production in the late 1980s. To increase the literacy levels and skills of Nova Scotian workers, in 1989 the Nova Scotia government created the Workplace Education Initiative (WEI). The WEI had four primary objectives:

- To create accessible learning opportunities for workers;
- To enhance the essential skills of participants in workplace learning;
- To influence economic and social development by providing relevant education; that impacts individuals where they work and live;
- To encourage the establishment of a lifelong learning culture in the province and its workplaces (Kelly, 2009).

To accomplish these objectives the Nova Scotia government collaborated with employers and labour unions. Each of the partners played a specific role in supporting the overall goal of the initiative: to provide accessible learning opportunities to Nova Scotia Workers.

The provincial *government's role* was that of *coordinator*. The government, through the Department of Education was responsible for the certification of workplace educators, promotion of workplace education, designing, implementing and evaluating workplace programs. To help with the coordination and evaluation of the programs, Education Field Officers (EFO's) were assigned to work directly with employers and labour unions. EFO's conduct learning needs assessments and work with each business to develop effective workplace training programs. The cost of an independent needs assessment and curriculum design are a substantial barrier to investment in workplace training programs. Employers are wary of this initial investment as there is no guarantee of a positive return on their investment. Funded by the provincial government, EFO's provide these services at no cost to the employers greatly decreasing the perceived risk associated with such an investment.

Employers and Labour Unions were primarily responsible for providing *labour market information* (Plett, 2008). Employers would advise the Department of Education on labour market trends, giving notice of potential skills shortages and growth industries. In addition to gathering labour market information, Labour Unions represented the needs of their members, and

encouraged employers to set up workplace education programs for their workers. Labour unions, businesses and the Nova Scotia Department of Education worked collaboratively in an advisory committee format to inform education policy.

To coordinate the information provided by each of the contributing stakeholders, the Nova Scotia Partners for Workplace Education committee (NSPWE) was formed. The NSPWE was comprised of representatives from three primary sources including, business, labour, and government, each having equal representation. In addition to the three main contributors literacy practitioners and workplace education instructors were also included in the committee. Emerging from the NSPWE were several important sub-committees that dealt specifically with issues such as curriculum development, requests for funding, and marketing strategies (Canadian Labour and Business Centre, 2005).

An additional partnership was formed between the Department of Education, Skills and Learning Branch, the NSPWE and the Association of Workplace Educators of Nova Scotia (AWENS). AWENS, formed in 1998, is comprised of workplace education professionals and provides “professional development, certification workshops, and networking opportunities” (AWENS, 2009). Courses are administered by certified workplace education instructors and are subsidised by the National Literacy Secretariat.

Partnerships between government, labour and business continue to inform the direction of adult literacy and workplace training policy.

Funding WEI Initiatives

As previously mentioned a sub-committee of the NSPWE is responsible for evaluating applications for workplace education funding. The NSPWE determines the extent of the funding needed, and makes funding recommendations to the Department of Labour and Workforce Development (DLWD). Funds are provided to businesses by the DLWD, but do not cover the

entire cost of implementation. The DLWD typically provides for the costs of the needs assessment and the workplace education facilitator's salary (Plett, 2007). Employers are expected to cover costs such as:

- Employee wages, including time for needs assessment
- Materials (computer's, books, pens etc.)
- Classroom facilities
- Completion celebrations.

Employer costs may increase to include a percentage of the facilitators' salary after the program has been established, as the DLWD expects employers to increase their contribution to workplace programs as they begin to reap the rewards.

There is no timeline or maximum financial assistance given. Funding parameters are determined and justified by the NSPWE funding sub-committee. Education Field Officers (EFOs) are responsible for conducting the training needs assessment and are available to assist employers with their funding applications. EFOs can also work with labour unions and employees to raise money for any uncovered costs. Between 2006 and 2007, the government of Nova Scotia contributed \$500,000 to the WEI, and employers and industry contributed roughly \$600,000, bringing the total invested in workplace education to \$1.1 million (Plett, 2007).

Outcomes

Based on the results of the 1994, 1998 and 2003 Adult Education and Training Survey (AETS), Nova Scotia worker participation in training and education was higher than the Canadian average (see Figure 3.2). As the Canadian participation in workplace training average decreased between 1992 and 1998, workers in Nova Scotia were increasing their participation. The 2003 AETS revealed that Nova Scotia employers were the primary source of job-related training,

providing 51.3 per cent, followed by professional associations like AWENS (18 per cent) (See Figure 3.3) (Plett, 2007). Between 2002 and 2005, 1,100 Nova Scotia workers participated in over one hundred workplace education programs (Plett, 2007).

Figure 3.2 Participation in Workplace Training (% of total work force), 1992-2003
Adapted from: *Program in the Workplace: How to Increase Employer Support* (Plett, 2008)

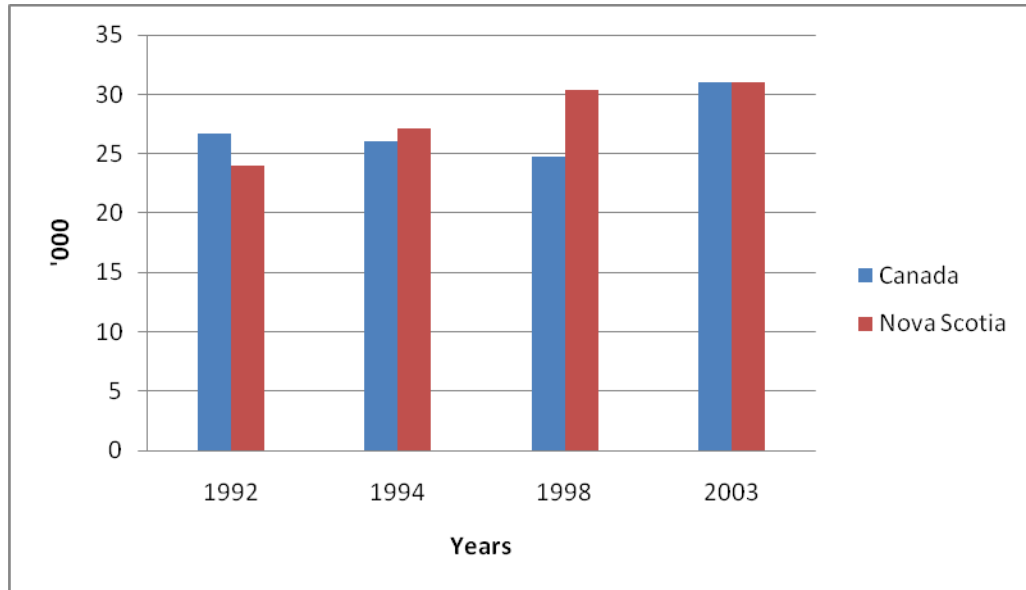
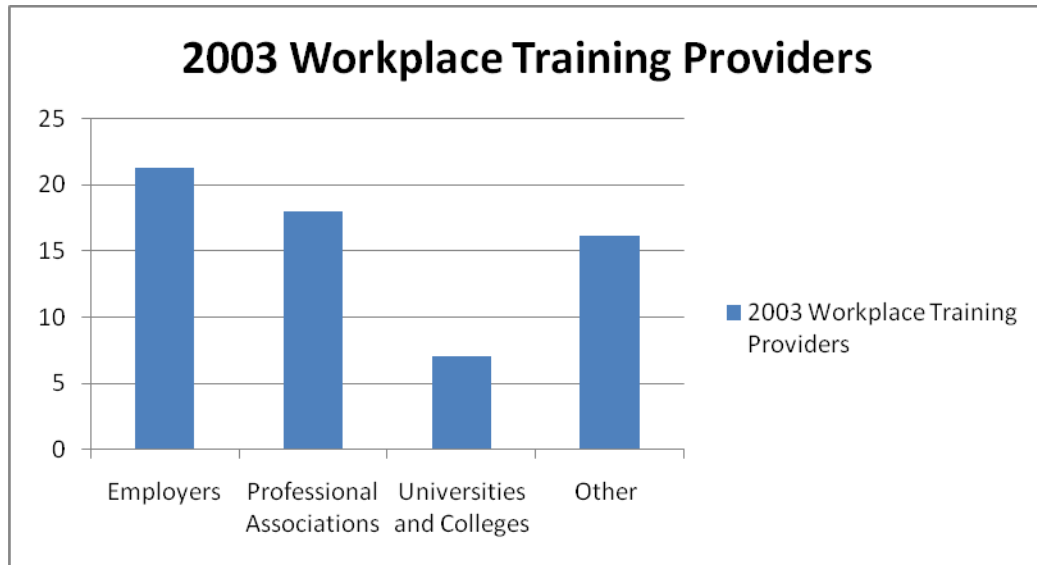


Figure 3.3 Total Number of Workplace Training Providers (2003)

Adapted from: *Program in the Workplace: How to Increase Employer Support* (Plett, 2007)



Although a direct correlation between an increase in workplace education programs and increases in IALS literacy levels cannot be definitively determined, the most recent IALS results shows a positive increase in skills in the three skills measured by the 1994 IALS and the 2003 IALS (See Table 3.1). A significant percentage of Nova Scotians still struggle with literacy, however there has been an increase in the level 2 and level 3 categories and a subsequent decrease in the size of the level 1 cohort.

Table 3.1 IALS Results for 1994 and 2003 (%)

Source: 1994 and 2003 IALs literacy results

Literacy Level	Prose Literacy %		Document Literacy %		Numeracy %	
	1994	2003	1994	2003	1994	2003
Level 1	25	11.9	22	13.7	23	19.7
Level 2	26	26.5	26	26.6	30	30.9
Level 3	35	42.1	33	39.2	30	34.5
Level 4/5	15	19.5	20	20.4	16	14.8

3.3 Quebec

Adult Education Policies

Prior to 1970, two groups were responsible for literacy work, school boards (commissions scolaires) and popular education groups (groupes populaires). School boards operated upgrading programs funded through the Federal government's Canadian Manpower Training Program from 1960 to 1970 (Darville, 1992). School boards operated basic literacy training programs and popular education groups worked primarily with immigrant communities, embedding literacy learning into tenant, health and integration services (Darville, 1992, p. 39).

As the 1970s progressed, the issue of literacy gained greater recognition, and reports released in the early 1980s recommended the creation of a provincial literacy policy. The 1982 Commission d'étude sur la Formation des Adultes, "called for basic education to be provided at no cost to adults" (Darville, 1992, p.39). The provincial government responded by creating a Statement and Action Plan, entitled "Continuing Education Program," and made the elimination of illiteracy a government priority (Quebec Government, 2006). The Statement and Action Plan identifies the importance of manpower training, calling for the integration of literacy work, formal education and training (Plett, 2007). However, due to the economic recession of 1981 to 1982, few of the adult literacy provisions were considered feasible, and those that could be implemented were not enough to facilitate the creation of a life-long learning education system (Quebec Government, 2006).

Quebec's economy began to recover in 1983, and at the forefront of this recovery was a boom in knowledge-based industries. Improvements in technology, the creation of new production methods and innovative approaches to organization necessitated the rapid renewal of knowledge (Plett, 2008). Meaning that individuals could "no longer spend 20 years in school and then expect to earn a living for the rest of their life from the skills they acquired during that period," creating the ideal condition "likely to foster the emergence of a culture of continuing education" (Quebec Government, 2007).

Adult education policy considered unrealistic in a time of recession became feasible as the economy improved (Godin, 1996). In 1984, the provincial government increased school board funding from \$13 million in 1984 to \$24.1 million in 1990, for the purposes of financing a variety of literacy-based services recommended in the Statement and Action Plan. Funding for community educational groups was also increased, from \$2.4 million in 1994- 1995 to \$ million in 1995-1996, in recognition of the "irreplaceable role these groups play in the socioeconomic development of Quebec" (Godin, 1996).

Training Tax Credits to 1 % Law

In the 1980's workplace training was a topic of discussion in various Quebec government reports and there was little dissention regarding its positive value (Plett, 2007). Investment in workplace training by Quebec employers was minimal at the time, and the identified purpose of workplace policy was "to encourage employer investment in training" (Plett, 2007, p.14.). A workplace training policy that mandated employers to invest 1 per cent of their payroll in employee training was at the centre of these discussions. In 1990, the 1 per cent payroll investment policy was shelved, "because of divergent opinions between the unions and employer associations" (Charest, 2008) and instead "the Quebec government adopted the **Credit D'impôt remboursable pour la formation**, a reimbursable tax credit for training programs" (Plett, 2007).

In 1991, the Quebec government made approximately \$100 million dollars available per year to Quebec's business community through tax credits. The tax credit program allowed small and medium sized business to claim up to 40 per cent of their eligible training expenses, and large businesses could claim a maximum of 20 per cent (Duranleau, 2000). In spite of the Quebec government's determination to "vigorously promote the tax credit in order to change employer behaviour towards training," the policy failed to achieve the desired results (Duranleau, 2000). Of the available \$100 million dollars only \$20 million was claimed in 1992, and claims increased only marginally over the next few years. The tax credit program was deemed a failure. One report speculated that the failure of the policy was due to the complicated application process, and a lack of up-take on the part of small businesses (Duranleau, 2000).

Winning the Quebec general election in 1994, the Parti Québécois revisited the 1 per cent payroll investment policy, and in June 1995, the Act to Foster the Development of Manpower Training (the Act) passed. The Act requires:

"every employer whose total payroll for a calendar year exceed the amount fixed by regulation of the government is required to participate for that year in the development of manpower training by allotting an amount representing at least 1% of his/her total payroll to be eligible training expenditure" (Duranleau, 2000).

Companies that do not invest at least 1 per cent of their total payroll in workplace training programs must pay an equivalent penalty to the National Training Fund. By 1998, the legislation applied to over 300 companies and "eligible expenditures totalled over 1 billion dollars" (Duranleau, 2000).

The purpose of the Act is to improve manpower qualifications, generate investment in training, facilitate the development of a lifelong learning culture, and carve out the role of the state in the world of workplace training (Duranleau, 2000). To accomplish these objectives, the Act outlines training regulations and defines the role of the state as a regulator and accreditor of workplace training programs, trainers and training organizations (Plett, 2007).

To oversee the Act, the Labour Market Partners Commission was established (Plett, 2007). Representatives from labour, education, employer groups, and community organization are appointed to the Commission, based on a three-year term (Duranleau, 2000). The Commission is responsible for the definition of policy and the creation of services outlined in workplace training legislation (Plett, 2007). The Commission is also responsible for the allotment of funds contributed Quebec's National Training Fund (le Fond national de formation de la main d'oeuvre).

Funding Workplace Training and the National Training Fund

The Act applies to companies with annual an annual payroll over 1 million dollars. Companies whose pay roll is greater than one million dollars must invest a minimum of 1 percent of their total payroll in skills development and workplace training. Businesses affected by the legislation, which fail to invest in workplace training, must pay the equivalent amount to the National Training Fund. The National Training Fund is then used to cover administration costs and provide financial support to additional training and skills development initiatives (Plett, 2008).

Outcomes

The application of the mandatory investment policy did not result in full participation. Between 2000 and 2003, 30 percent of small businesses and 20 percent of medium sized businesses did not comply with policy (see Table 3.2) (Plett, 2007). To reduce this uneven contribution between small, medium and large businesses, the mandatory training contribution thresholds were adjusted, and presently only organizations with a payroll over 1 million dollars are required to participate (Plett, 2007).

Table 3.2 *Employer Investment in Training, 2000 & 2003*

Adapted from: "Fonds National De Formation De La Main D'oeuvre, Rapport D'activite 2003-2004," Quebec: Government du Quebec, 2004

Size of Firm	% of Total Salary Invested		% of Employers investing 1% in training		% Employers investing in the national training fund	
	2000	2003	2000	2003	2000	2003
Large	1.64	1.51	87.6	88.2	12.6	12
Medium	1.21	1.24	78.3	80.1	21.8	20
Small	1.07	1.15	67.9	69.8	32.3	30

Although investment and participation in workplace training by Quebec organizations is less than some other Canadian provinces workplace-training policies are working to decrease this gap. Between 1997 and 2003, investment and participation in workplace training increased from 21 percent to 33 percent, the fastest percentage rate increase in the country (Belanger et al. 2008).

3.4 British Columbia

This section describes British Columbia's Adult Basic Education (ABE) and Training Tax Credit (TTC) policies separately. The review of the ABE program is covered first.

Adult Education Policies

1965 marked a year of great post secondary education expansion as junior colleges spread throughout the province (Damer, 2001). Initially these colleges catered to young adults, however they quickly transformed into community colleges, attracting a wider range of adult learners (Damer, 2001). By 1967, the federal government provided tax allowances to adults wishing to pursue their education, alleviating some of the financial burden for individuals (Damer, 2001). As the federal government began to support those in pursuit of post secondary education, it also focused much of its attention on the need for the provision of Adult Basic Education (Damer, 2001). ABE programs, funded by the federal government, did not provide an

equivalent to a high school diploma but were designed to increase enrolment in advanced technical programs (Damer, 2001).

In the early 1980s BC found itself in the midst of a major economic recession, as its' "previously stronger regional economies joined the ranks of the most depressed regions" (Hulchanski, 1988, p. 117). Social cuts, informed by fiscal restraint policies affected every area of social service support including college and university programs (Hulchanski, 1988). However, as a means of dealing with record high unemployment rates, the provincial government provided financial support to adult learning, in addition to federal government contributions to support ABE programs, in an attempt to reduce unemployment through skill upgrading (Hulchanski, 1998). By 1991, the province made high school education equivalency programs free to all adults over the age of 19 who had not completed high school (Literacy BC, 2008). However, adults wishing to upgrade their skills who had completed high school were not eligible for any tuition-free ABE programs, greatly restricting access for a large proportion of adult learners.

In 2007, the provincial government removed the most substantial barrier to ABE programs allowing all adults access regardless of whether they had completed high school. Opening up ABE programs to all adults was in recognition of the diversity of adult learners' need's as many adults in BC who have completed high school do not have the skills necessary to pursue postsecondary education or gain employment for a variety of reasons, including:

- Employers and educational institutions may not recognize high school equivalencies making it difficult to gain entrance into post secondary programs or find employment;
- An adult may have experienced skill loss over time;
- An adult may have achieved their high school diploma, but struggle with learning disabilities that were un-diagnosed and never addressed.

ABE programs had two primary objectives:

- To provide students with the pre-requisites required to continue into postsecondary education,

- To provide students with the skills necessary to find employment or gain better employment (Ministry of Advanced Education and Labour Market Development, 2009).

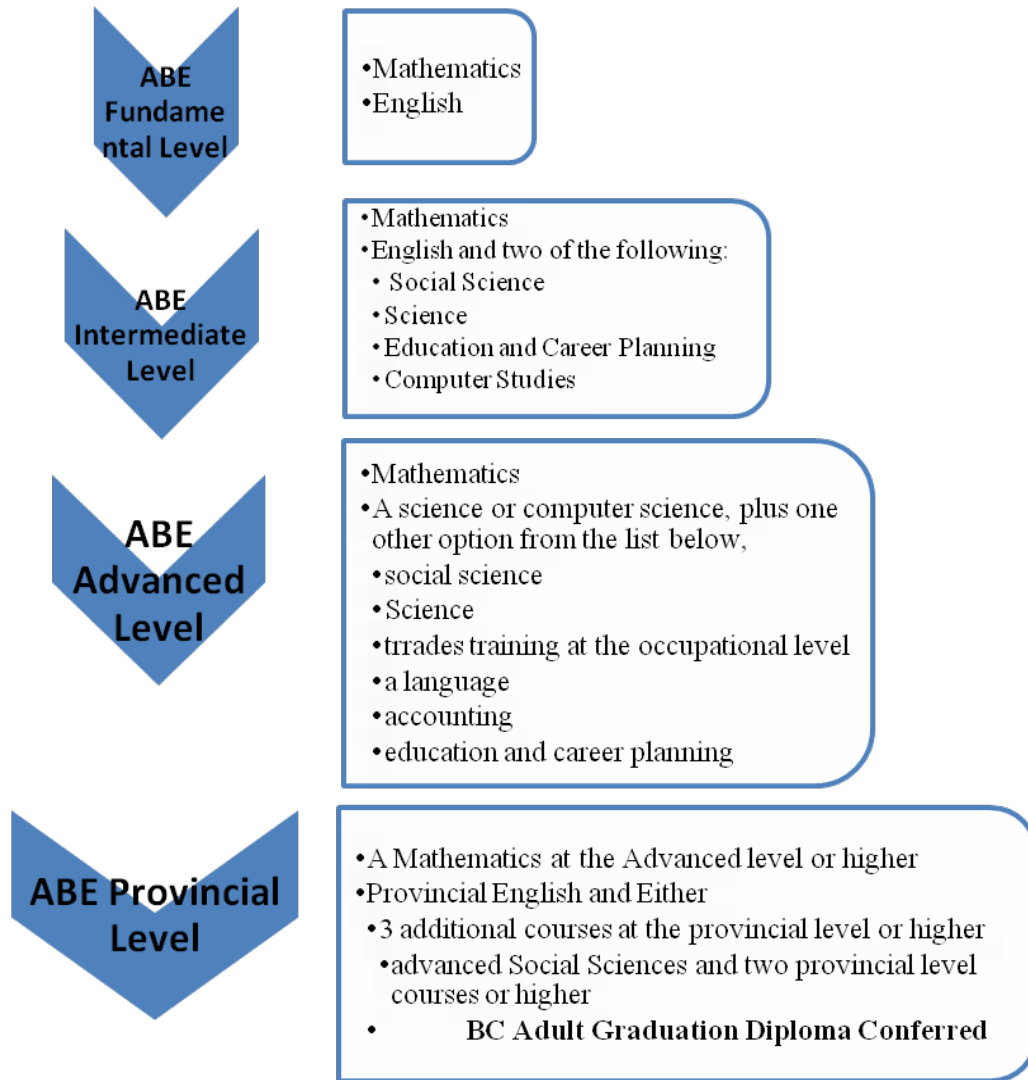
Adults attending ABE program are able to choose from a variety of courses ranging from basic language and math skills to college preparation and career preparation. An assessment of the adult's academic abilities determines which ABE program an adult learner is qualified to enrol.

BC's ABE program is comprised of four levels: fundamental, intermediate, advanced and provincial. As an individual progresses through the ABE levels the skills and knowledge required increases incrementally, allowing the students to absorb the learning material at a manageable pace (see Figure 3.4). Upon the successful completion of the final level, ABE Provincial Level, participants receive a British Columbia Adult Education Diploma (AED) (Ministry of Advanced Education and Labour Market Development, 2009). This new diploma replaces the previous high school equivalent diploma, the Adult Dogwood. Many post secondary institutions accept the AED as a high school equivalent. However, employers do not regard the AED as highly as a Canadian high school diploma (Ministry of Advanced Education and Labour Market Development, 2009).

3.4

ABE Level Progression and Description

Adapted from: 2008--2009 ABE Articulation Handbook, Ministry of Advanced Education and Labour Market Development



3.4.1.1 Funding

ABE programs in BC receive funding from two sources, the Ministry of Education (MOE) and the Ministry of Advanced Education and Labour Market Development (ALMD). According to Shelly Gilmour, ALMD's Adult Literacy and Adult Basic Education Officer, ALMD and the MOE contributes approximately 91 million dollars combined each year to support

ABE programs in the province. ALMD provides the bulk of the funds, contributing \$58 million dollars.

3.4.1.2 Outcomes

Each year roughly 30,000 adults enrol in ABE courses or programs. However, according to ALMD's 2005 ABE Survey, roughly 30 percent (~10,000 adults) of all ABE students do not complete the program (Ministry of Advanced Education and Labour Market Development, 2005). ALMD's ABE Survey revealed the variety of reasons why adult learners did not complete their ABE course or program (see Table 3.3). Although only 5 percent of students reported financial difficulties as their reason for leaving, 24 percent of all former ABE students, both leavers and completers¹, when asked directly "said they had experienced financial difficulties while enrolled in their courses"(Ministry of Advanced Education and Labour Market Development, 2005). To cover the costs of attending ABE programs, such as day care, transportation and text books the majority of ABE leavers, 56 percent worked while attending school, 23 percent were supported by friends and family, and 19 percent were able to secure subsidised or free accommodation (Ministry of Advanced Education and Labour Market Development, 2005). Most notably, employers of ABE students are not cited as a financial contributor although the majority of ABE students were employed while enrolled in a course or program.

¹ ABE Leaver, is a person who failed to complete the course or program they were registered in. An ABE completor is a person who successfully completed the course or program they were registered in.

Table 3.3 Educational and Personal Reasons for Leaving an ABE Course or Program (%)

Adapted from: ALMDs ABE Survey results, 2005

Top 3: Educational Reasons for not completing	ABE Fundamental Leaver	ABE Advanced Leaver
Completed Wanted Course	12%	15%
Completed Needed Credits	4%	12%
Transferred or qualified for program	5%	9%
Top 3: Personal Reasons for not completing		
Job Change	20%	20%
Changed Mind	16%	15%
Personal Circumstances	25%	13%

In spite of financial difficulties while attending ABE programs, many former ABE students were able to gain entrance into a postsecondary institute to continue their education. The majority of ABE completers and leavers were enrolled in a certificate or diploma program at the time of the survey. 24 percent of ABE Fundamental and 45 percent of ABE Advanced completers continued to further education (Ministry of Advanced Education and Labour Market Development, 2005). 15 percent of ABE Fundamental and 34 percent of ABE Advanced leavers also pursued further education. ABE leavers in all levels were more likely to attain a certificate, diploma or baccalaureate degree where as ABE completers were more likely to pursue an Associate Degree, Arts Diploma or enrol in pre-apprenticeship training programs (Ministry of Advanced Education and Labour Market Development, 2005). Overall, 69 percent of ABE completers and 49 percent of ABE leavers enrolled in further education (Ministry of Advanced Education and Labour Market Development, 2005).

Although the majority of ABE students did gain access to further education, their employment outcomes were not as positive. “47 percent of employed respondents said they had the same job before or while they were enrolled in ABE and Career Preparation courses” and an additional 22 percent of ABE completers remain unemployed (Ministry of Advanced Education and Labour Market Development, 2005, p. 5). Considering BC’s booming economy and low

unemployment rate in 2005 (5.9 %), recent adult ABE students may have even greater difficulty achieving employment in the current economic climate.

BC's ABE programs are relatively successful in providing ABE students with the skills necessary to pursue further post secondary education, as the majority of ABE students (both completers and leavers) continued onto other post secondary programs. However, ABE employment program goals have not been achieved as the unemployment rates of ABE students remains high and annual employment salaries do not equal or exceed the provincial median.

Apprenticeship Tax Training Credits

Several catalysts stimulated the creation of BC's Training Tax Credit (TTC). According to the Canadian Council on Learning, the "skilled trade workforce is ageing more rapidly than the overall workforce, and the number of young workers available to replace retiring older workers is lower than in the overall workforce" (Canadian Council on Learning, 2006). Although enrolment in apprenticeship programs reached record highs in 2003, according to a recent Construction Sector Council Report "the number of apprenticeship completions in 2005 was lower than the yearly averages from 1996 to 2005" (Canadian Council on Learning, 2006, p. 6). The decrease in completions in more recent years is believed to be the result of increased high demand for skilled labourers (Canadian Council on Learning, 2006).

High demand for labourers creates opportunities for uncertified trades people to obtain high paying, full time employment without completing their apprenticeship program. In 2005, not only were a large proportion of apprentices not completing programs, but enrolment in apprenticeship trades programs was declining. To increase the number of apprentices enrolling and completions, in 2007 the BC government instituted the Training Tax Credit program.

The TTC provides employers and employees with refundable tax credits for programs administered by the Industry Training Authority (ITA). The TTC program has three main

elements: basic credits, completion credits, and enhanced credits for First Nations persons and individuals with disabilities (Canadian Council on Learning, 2006).

Basic credits are available in addition to the Canadian Federal Government's training incentives. The federal government offers tax credits to those in Red Seal apprenticeship training programs only, as Red Seal certification is a nationally recognized interprovincial level of certification. The basic credits provided by the province may be claimed in addition to the federal credits. British Columbia TTC's can be used by employers providing and employees receiving apprenticeship training in the 79 BC-recognized non-Red Seal programs. Basic credits are available to employers and employees for the first two years of apprenticeship training. Completion credits are available for those employers and employees providing or receiving apprenticeship training at apprentice level 3 or above. Completion credits were specifically designed to increase the number of apprenticeship completions leading to a journeymen certification.

Enhanced Training Credits are available only to employers of First Nations or disabled individuals apprentices. The enhanced training credit provides additional incentive for employers to hire and train apprentices from these historically underutilized groups. The enhanced potential tax credit claim amounts are greater than those accessible through the basic tax credit and the completion tax credit programs.

3.4.2.1 Funding

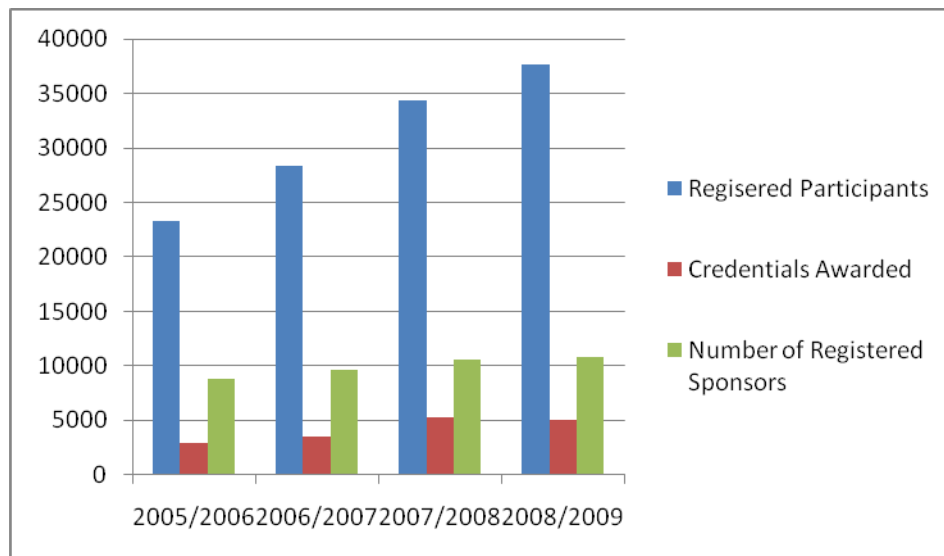
Both the federal and provincial governments have an Apprenticeship Training Tax Credit program. The federal government subsidizes the cost of training Red Seal apprentices for the first two years of their apprenticeship and in 2006 BC's provincial government dedicated over \$90 million to "expand training opportunities in construction trades and emerging industries" (Canadian Council on Learning, 2006). Provincial funding subsidizes the first 24 months of

employer training costs for non-Red Seal apprentices and “provides a credit to employers when an apprentice completes level 3 or higher of either a Red Seal or non-Red Seal program” (Ministry of Small Business and Revenue, 2009).

3.4.2.2 Outcomes

Since 2006, BC’s TTC has subsidized the training costs of over 120,000 apprenticeships successfully increasing the number of apprentices and employer sponsors (see Figure 3.5). However, completion rates have not increased in proportion to the increase in employer sponsorships, as only 40 percent of all apprentices complete their apprenticeship (Industry Training Authority, 2008). It is important for apprentices to complete their apprenticeship as outcomes differ between those who attained journeyman certification.

Figure 3.5 Number of Registered Participants in Apprenticeship programs, Number of Credentials Awarded, and the Number of Registered Sponsors, 2005-2009
Adapted from: ITA Performance Measurement Report, March 2009



Many employers will hire only certified trade’s people and this hiring trend becomes more predominant during a recession (Saskatchewan Apprenticeship and Trade Certification Commission, 2009). Employers given the choice between two individuals with similar experience

will most likely hire the certified individuals. In addition, employers across Canada recognize journeyperson certification, allowing for greater labour force mobility. The attainment of journeyperson certification has an effect on wages because in BC, minimum journeyperson wages are set by the Industry Training Authority. Without journeyperson certification wages are determined solely by the employer regardless of the workers skills.

3.5 Case Summary

Table 3.4 compares the selected case studies and illustrates the type of policy, the catalyst resulting in the policy change, the primary goal of the policy, if the policy requires regional coordination and the outcome measures.

Table 3.4 Case Summary Matrix

	Nova Scotia	Quebec	British Columbia	
Policy Name	Workplace Education Initiative (WEI)	The Act to Foster the Development of Manpower Training	Adult Basic Education (ABE)	Training Tax Credit (TTC)
Policy Implementation Date	1989	1995	2007	2007
Type of Policy	Voluntary	Mandatory	Voluntary	Voluntary
Catalyst	Low Adult Literacy Rates	Low investment and participation in workplace training	High unemployment	Skills shortage
Primary Goal	Provide accessible learning opportunities to Nova Scotia Workers	Address workforce adaptability and qualifications through employer investment in training	Increase enrolment in postsecondary programs to improve labour force skills and decrease unemployment	Increase enrolment and completion of non-red seal trades apprenticeships
Funding Responsibilities	Government and Business Cost Share	Business Funded	Government Funded	Government and Business Cost Share
Regional Stakeholder Coordination	Yes	Yes	No	Yes
Outcome measures	# of employers # of employees	# of employees # of employers # of hours per/employee	# of registrants # continuing education % employed	# of registrants, # of registered sponsors # of credentials awarded

Chapter 4: Case Study Evaluation

4.1 Explanatory Variables and Definitions

Table 4.1 presents the dependent variable and three independent variables to represent the meta-criteria required to increase access to skills development and workplace training. I choose the following explanatory variables based on their prevalence in the case studies: regional stakeholder coordination, professional capacity and the provision of program incentives. The variables represent the meta-criteria required to increase the provision of workplace training programs. I will examine each provincial policy to show if it meets the conditions specified in the description of the variable.

Table 4.1 *Dependent and Explanatory Variable Definitions*

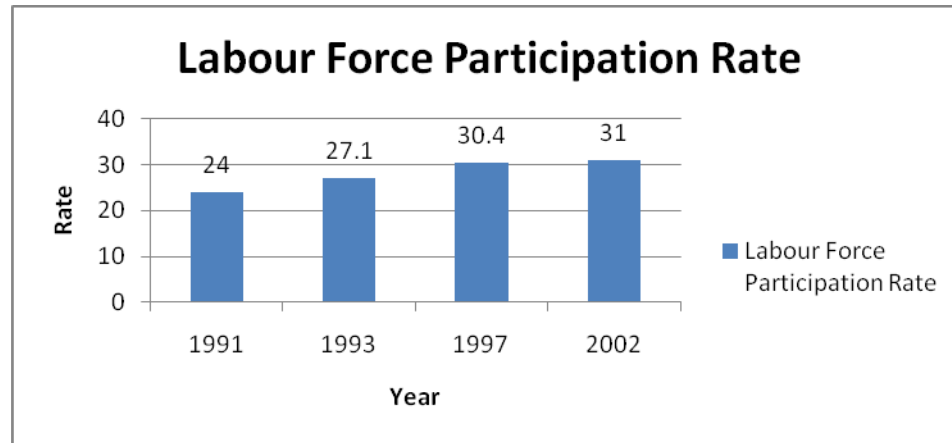
Variable (Meta-criteria)	Definition
Dependent Variable	
Successful Adult Education and Skills Development Program	Labour force access to skills development and training has increased as a result of the policy.
Explanatory Variables	
Regional Stakeholder Coordination	There is regional coordination that includes representatives from a variety of partners including, but not limited to: businesses, employees, workplace-training specialist and the provincial government.
Professional Capacity	Adult education and workplace training professionals are available to conduct workplace training needs assessments and develop training curriculum.
Program Incentive	The policy mandates investment from businesses or provides incentive for investment.
Outcome Measures	
Policy Outcome Measures	<p>There are meaningful data that reveal the impact of the policy on the outcomes of the policy.</p> <ul style="list-style-type: none"> • Increased employer sponsorship of skills development training • Increased employee participation in skills development training • Increased employment • Improved ALL scores

4.2 Nova Scotia-Workplace Education Initiative (WEI)

Nova Scotia’s WEI policy can be deemed a success as it has increased labour force access to skills development training, by providing financial assistance to employers so they can provide in-house skills development training (see Figure 4.1).

Figure 4.1 Labour Force Participation in Skills-Development Training Rate (%) (1991-2003)

Adapted from: *Programs in the Workplace: How to Increased Employer Support* (Plett 2007)



Regional Stakeholder Coordination

The success of the Workplace Education Initiative is reliant upon the regional coordination of the Nova Scotia Partners for Workplace Education Committee (NSPWE). The NSPWE is comprised of representatives from the provincial government, business, unions and workplace-training professionals. Each representative group plays an important role as they contribute regional and professional knowledge:

- Businesses contribute industry expertise,
- Labour/Unions contribute job expertise and knowledge,
- Adult educators partner with workplaces,
- Government constitutes knowledge of adult education and best practice.

The purpose of the committee is to decrease employer barriers to investing in workplace training by making funding and program recommendations to the Department of Labour and Workforce Development (DLWD) on workplace education policy.

Professional Capacity

Education Field Officers (EFOs) are a member of the NSPWE, supported by the DLWD. EFOs provide support to local businesses by conducting learning needs assessments, recommending programs and connecting workplace educators with businesses. To ensure the accessibility of workplace education specialists the Department of Education Skills and Learning Branch and the NSPWE have a close relationship with the Association of Workplace Educators of Nova Scotia (AWENS). AWENS provides professional development courses, networking opportunities and Workplace Education Instructor Certification. To ensure the availability of workplace educators, AWENS and the workplace education staff at the Department of Education, developed the Workplace Education Instructor Certificate. Instructors are certified by the Department of Education, Skills and Learning Branch.

Program Incentives

The Nova Scotia government provides funding incentives to employers to increase the provision and accessibility of workplace education and training programs. Government provides funds to cover the EFO salaries, conduct needs assessments, design curriculum and implement new programs. After the program is implemented, the financial ability of the employer is assessed to determine if long-term support is needed. If an employer is financially capable of paying the program maintenance costs, funding assistance is withdrawn. Funding claw-backs maintain employer accessibility to the fund, allowing for continuous annual development of new programs.

Policy Outcome Measures

Nova Scotia measures employee accessibility to skills development training by collecting information on:

- The # of programs in the province,
- The # of work sites participating,

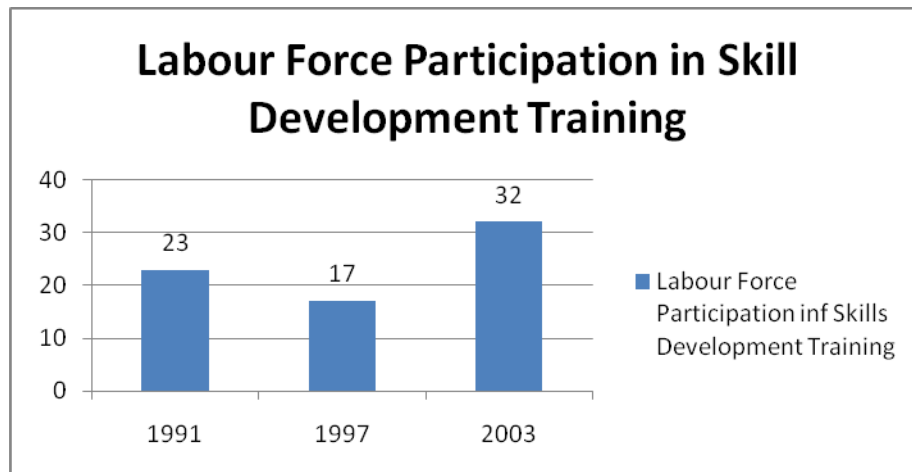
- And employer investment (\$) by region and industry.

These three measurements allow policy makers to track investment and participation in workplace training programs while considering regional and industrial distribution. However, data collected by the NSPWE does not reveal employment outcomes, so it is not possible to tell if the development of skills through the provision of workplace training programs has resulted in increased employment opportunities.

4.3 Quebec-1 Percent Law

Quebec’s “1 Percent Law” is demonstrative of a successful workplace education policy because it mandates employer investment in workplace training and skills development. By 2003, 37 391 employers provided skills development training, greatly increasing labour force accessibility to skills development programs. Between 1991 and 2003, labour force participation rates in skill development training has increased (See Figure 4.2).

Figure 4.2 *Labour Force Participation Rate (%) in Skills Development Training*
Adapted from: *Programs in the Workplace: How to Increased Employer Support, 2006*



Regional Stakeholder Coordination

Workplace policy in Quebec is informed by the Labour Market Partners Commission and seventeen Regional Labour Market Partners Councils. The Labour Market Partners Commissions

is responsible for defining labour market objectives and strategies, providing advice to the Minister of Education on labour market policy, creating regulation, and coordinating workplace-training efforts undertaken by the regional councils. The Regional Labour Market Partners Councils identify potential regional labour market problem areas, establish workforce/employment intervention priorities and regional objectives, and propose criteria for the distribution of resources (Quebec Government, 2004).

Professional Capacity

The Act to Foster the Development of Manpower Training provides employers with a list of over 5000 government recognized workplace training providers and adult literacy trainers including consulting firms, adult literacy organizations, professional associations and adult and continuing education services (Belanger et. al., 2008). To be included on the list, workplace training organizations and providers must meet requirements identified by the Department of Education. The requirements include:

- “A minimum of 135 hours training in teaching methods

Or

- A minimum of 250 hours experience as a training instructor

Or

- A minimum of 90 hours of training in teaching methods and at least 100 hours of experience as a training instructor” (Belanger et al., 2008).

Program Incentives

Quebec’s workplace training policy is compulsory, as the policy mandates employer investment in skills development and workplace training. Those who do not comply with the policy are required to pay the training cost equivalent to the regional training fund. The regional

training fund provides for infrastructure costs and supports additional workplace education programs and initiatives.

Policy Outcomes Measures

In Quebec, labour force accessibility to skills development programs is measured by:

- The number of employers providing workplace training and skills development programs
- The financial contribution (\$) to the National Workplace Training Fund
- And the payroll % employers invest in skills development and workplace training.

As more employers comply with the policy, a larger proportion of the labour force will have access to skills development and workplace training. Measuring the total payroll percentage beyond the mandated 1 percent, is another employer support measure. Since the implementation of the policy, employers on average have invested 1.3 percent of their payroll amount in training which is greater than the 1 percent mandated amount (Plett 2007).

4.4 British Columbia-Adult Basic Education (ABE) Program

Under the definition of the dependent variable, BC's ABE program is successful, as it increases access to skills development and training programs. Before ABE programs were tuition free, adult enrolment in the programs was significantly lower. Eliminating tuition costs for BC adults has eliminated one of the primary barriers to skills development and adult education, tuition costs. However, many find ABE programs inaccessible because of the opportunity costs associated with formal off-site programs.

Regional Stakeholder Coordination

To increase enrolment in ABE programs and raise awareness around adult literacy issues, Literacy BC, the Ministry of Advanced Education and Labour Market Development (ALMD), the Ministry of Education (MOE), regional colleges, school districts, 2010 Literacy Now and community organizations work with and support 16 Regional Literacy Coordinators (RLCs). RLCs,

- Build networks of support at the regional level
- Provide consultation and support to literacy and ABE practitioners, volunteers, learners and community members,
- Deliver workshops and training on literacy and learning,
- And offer expertise to organizations and businesses on literacy issues.

Although there is successful literacy coordination, there is no formal regional stakeholder coordination. The importance of regional stakeholder coordination is to facilitate the centralization of labour market information, including changes, trends, and needs. Without creating a direct information link between business, labour and the government, these stakeholders, acting in isolation, will have little influence on workplace policy.

Professional Capacity

Unlike Quebec, the institute (e.g. college, university etc.) providing the program determines ABE instructor qualifications. Universities and colleges typically require ABE instructors to have:

- A BA in Adult Education + experience teaching in an adult learning setting,

Or

- A BA in a related field + a MA of Adult Education + experience teaching in an adult learning setting,

Or

- Significant experience and knowledge of adult education methods

Due to the variety of possible experience and academic combinations necessary to qualify as an ABE instructor, it is likely that the current supply of instructors is sufficient to meet current and future demands.

Program Incentives

ABE programs are provided through the college and university system. Tuition and program costs are provided for by the provincial government, and as such program expansion must be approved by the Ministry of Advanced Education and Labour Market Development. There is no monetary incentive for universities or colleges to expand the program, as they cannot collect student tuition.

The ABE program may have an impact on employer provided skills development programs, as employers can rely on programs offered through ABE programs to improve the skills of their staff. Employers may choose to provide financial support to their employees while they are attending school, but according to the most recent ABE Evaluation Survey only, 8 percent of students reported receiving financial support for their education from their employer.

Policy Outcome Measures

To determine changes in labour force accessibility, the following are reported:

- Annual % change of students employed full-time that complete the ABE program
- Annual % change of students employed part-time that complete the ABE program
- Annual % of students denied financial assistance.

4.5 British Columbia-Training Tax Credit

BC's Training Tax Credit program is successful when considering the dependent variable as it has increased the number of employer sponsors and enrolment in apprenticeship programs.

However, the provision of a completion TTC, designed to encourage apprenticeship completion has had little success. Although participation and sponsorship have increased, 80 percent of apprentices do not complete the program.

Regional Coordination

The Industry Training Authority (ITA) manages BC's industry training system, coordinating with "industry, training providers, labour unions and other stakeholders to meet industry's training needs"(Industry Training Authority, 2009). The ITA is directed by a Board of Directors "whose members come from diverse sectoral backgrounds and have broad expertise regarding industry needs and training approaches" (Industry Training Authority, 2009).

Professional Capacity

Apprenticeships can be sponsored by:

- An employer registered with the ITA
- Certified tradesperson registered with the ITA or ITA approved equivalent tradesperson
- Joint union-management training board
- Industry association
- Or training institute (Industry Training Authority, 2009).

Although increases in employer sponsorship are able to meet current demand, there is concern about the loss of a large, experienced cohort as baby boomers in the trades reach retirement age. The retirement of the baby boomer generation is expected to impact trades-based industries more than any other, as the majority of certified trades professionals (74 %) are over the age of 45(Support Staff Education Adjustment Committee, 2009). There is concern that as the baby boomer generation begins to retire "gaps will be created in the workforce and districts will be losing some of their most experienced people" (Support Staff Education Adjustment Committee, 2009).

Program Incentives

The ITA provides guidance and assistance to employers and apprentices during the application process, decreasing the complexity of the TTC claim process. Training tax credits subsidize apprenticeship wages, decreasing employer labour and training costs. Employers impacted by the skills shortage, view the possible acquirement of a newly certified trades-person as additional incentive. Through this program employers have the ability to partially control their future supply of skilled labour, sponsoring apprentices based on their expected growth or need.

Policy Outcome Measures

The ITA reports on a variety of measures, most importantly the number of registered participants (apprentices), the number of credentials awarded (apprenticeship completions), and the number of registered sponsors (employers sponsors). Although the ITA collects information regarding the number of credentials awarded, it does not collect data that can speak to why apprentices do not complete their apprenticeship. According to the Centre for the Study of Living Standards (CSLS), the larger the proportion of middle aged apprentices the greater the non-completion rate (Sharpe et al. 2005). Adults with prior work experience are more likely to be influenced by demanding financial and family responsibilities and as such are less likely to complete their apprenticeship than their younger peers (Sharpe et al. 2005). Individuals who make the school-to-work transition, from high school or university into a trades apprenticeship program are more likely to complete their apprenticeship because, at their young age, it is likely that they will encounter less barriers to completion (Sharpe et. al. 2005).

4.6 Variable Summary

Table 4.2 summarizes the meta-criteria necessary to implement each policy option.

Table 4.2 Policy Option Variable Summary

Variables and Outcome Measures	Nova Scotia WEI	Quebec "1% Law"	British Columbia	
			ABE	TTC
Regional Stakeholder Coordination	Regional councils	Regional Councils and a Provincial Commission	Regional Literacy Coordination Only	Board of Directors, members represent labour, business, government and workplace training professionals
Professional Capacity	Association of Workplace Educators of Nova Scotia (AWENS)	Provincial Training Professional List	Credential diversity ensures continuous supply	Sufficient present supply of trainers, demand is expected to increase in the near future
Program Incentives	Employers, regardless of industry can apply for financial support to implement workplace training program	Mandatory compliance	Little to no incentive, may impact the provision of employer sponsored workplace training	Apprenticeship sponsors are able to claim a training tax credit, subsidizing their training and labour costs
Policy Outcome Measures	<p># of programs and participating sites</p> <p>\$ Employer investment by region and industry</p>	<p># of employers that provide skill development or training programs</p> <p>\$ contributed to the National Workplace Training Fund</p> <p>% of pay roll invested in training</p>	<p>% change of students employed part-time, and full-time</p> <p>% of students denied financial assistance</p>	<p># of registered sponsors</p> <p># of registered apprentices</p> <p># of apprentices that complete per year</p>

Chapter 5: Description of the Policy Alternatives

5.1 Adult Basic Education

Description of the Policy

- Status Quo ABE in British Columbia
- Goal:
 - Increase enrolment in post secondary programs
 - Improve labour force skills and decrease unemployment
- Policy Design
 - ABE programs are tuition free and available to any adult BC resident
 - ABE programs are administered by regional colleges and some universities
 - There are four ABE program levels, completion of the final level, Provincial ABE, a high school equivalent diploma is conferred
- Actors
 - **The Ministry of Advanced Education and Labour Market Development and the Ministry of Education:** provide annual funding to support ABE programs throughout the province
 - **Regional Literacy Coordinators (RLC):** promote enrolment in ABE programs

- **Colleges and Universities:** Administer ABE programs to the public and work with the support of their regional RLC.

5.2 Expanded Training Tax Credit

Description of the Policy

- Goal:
 - Increase labour force access to skills development and workplace training
 - Increase employer sponsorship workplace and skills development training
- Policy Design
 - Expand the TTC to include non-trade based industries
 - The Industry Training Authority regulates industry training standards
 - Employers pay a working wage to their staff while training, so they can “learn while they earn”
 - Employers providing training can apply for a training tax credit that subsidizes their training and labour costs
- Actors
 - **The ITA:** maintains industry training standards, and is directed by a Board of Directors comprised of actors from diverse backgrounds, including, labour, business and industry
 - **Employers:** Sponsor and provide workplace and skills development training to their staff

- **Government:** promotes industry training to encourage employer sponsorship and labour force enrolment

5.3 Provincial Workplace Training Fund

Description of the Policy

- Goal:
 - Provide accessible learning opportunities to the labour force
 - Increase employer sponsorship of workplace training programs
 - Increase the number of small businesses provide workplace training
- Policy Design
 - A regional fund is used to sponsor the development of workplace training programs
 - Small businesses that do not have the financial capacity to provide workplace training can apply to the fund for the money necessary to design and implement a workplace training program that has a literacy and essential skills component
 - Small businesses, that currently provide workplace training, can apply to the fund for the money necessary to embed a literacy and essential skills component
- Actors
 - **The Ministry of Advanced Education and Labour Market Development:** is responsible for workplace learning, collecting labour

market information, providing adult basic education, apprenticeship training, conducting research and developing policy

- **Education Field Officers (EFOs)**: are assigned to work directly with employers and labour unions, conduct learning needs assessments and develop effective workplace training programs
- **Workplace Education Committee**: is comprised of representatives from labour, business and government and is responsible for providing valuable labour market information to the Department of Education
- **Association of Workplace Educators**: provides professional development and certification workshops to workplace training professions

5.4 One Percent Law

- Goal:
 - Address workforce adaptability and qualifications through employer investment in training
 - Increase labour force accessibility to workplace training and skill development programs
 - Increase employer investment in workplace training
- Policy Design
 - Mandates employer investment in workplace training programs for employers with a payroll amount exceeding the pay-roll threshold (eg. \$1,000,000 annually)

- Employer investment in workplace training must be equal to the payroll percent threshold (e.g. 1 %)
- Employers that fail to invest a percentage of their payroll in workplace training, must pay a tax penalty equal to the training amount to the Provincial Training Fund
- Monies contributed to the training fund are used to support infrastructure costs and develop additional workplace training programs
- Actors
 - **Labour Market Partners Commission:** includes representatives from labour, education, employer groups and community organizations. The commission is responsible for defining policy, and creating the services outlined in existing workplace training policy
 - **Employers:** either invest in workplace training programs or make an equivalent contribution to the Provincial Training Fund.

Chapter 6: Criteria and Measures

This section outlines the four criteria and measures I use to evaluate the four policy alternatives described in the previous chapter to increase labour force accessibility to skills development and workplace training. The four criteria are budgetary costs, two measures of effectiveness, administrative feasibility, and political feasibility.

6.1 Budgetary Costs

The criterion compares the overall monetary cost of implementing a particular policy relative to the cost of providing the status quo- the ABE programs. As annual education budgets continue to decrease, the policy options should seek to minimize the cost of providing skill development training for provincial government and BC employers. In addition to annual program costs, I evaluate the cost of providing the program to each person who completes a workplace training programs or receives certification. To determine the per person program costs, the annual program cost is divided by the number of students that complete the program (See Figure 6.1).

Figure 6.1 Formula for Per-Person Program Provision Cost

$$\frac{\text{Cost of Training Program}}{\text{Total \# of Certified Participants per year}} = \text{Average cost per participant per year}$$

Learners that enrolled in a training program and did not complete or receive certification are not included in the calculation. Certification is important to consider, as the positive outcomes from achieving a higher academic or skill standing are far greater than acquiring skills without formal recognition (Government of Canada, 2008). The per person costs of providing the program will be compared to the per person costs of maintaining ABE programs.

6.2 Administrative Feasibility

This criterion measures the relative ease or difficulty of implementing a policy option relative to the status quo. It determines whether the policy can be implemented within existing administrative constraints or if changes are necessary. This criterion also measures if the policy alternative is complex in design and implementation. Information about administration complexity comes from the case studies and workplace policy best practices literature. Special consideration is given to the required program infrastructure, professional capacity, partnerships and regional coordination.

6.3 Political Feasibility

This criterion measures political acceptance of a new program. First, the criterion examines whether the ministry of Advanced Education and Labour Market Development and the Ministry of Education would support this initiative based on their documented goals and responsibilities regarding the provision of adult education programs. The following goals as outlined by the Liberal Government's Minister of Advanced Education and Labour Market Development will be used to assess political feasibility of each alternative:

- 1) Making BC the most literate jurisdiction in North America,
- 2) Improve workplace skills,
- 3) Tackle current and anticipated labour shortages.

Although some policies may address all of the goals outlined by the Ministry of Advanced Education and Labour Market Development, public support or opposition to the policy is likely to affect government support for the police. Stakeholder support is determined by the likelihood that the alternative will receive support from small and large businesses, based on the business response to the implementation of the policy as identified in the case studies.

6.4 Effectiveness

To increase the skills of the workforce, it is important that the workplace training/adult education policies increase employer sponsorship and labour force participation in skill development and workplace training initiatives. Effectiveness measures employer sponsorship and employee participation rates rather than the effectiveness of each individual workplace-training program. This definition of effectiveness concentrates on the first step to enhancing BC's labour force skills (increasing access to skills development training) because there is no one-size-fits-all training program. Training program and their effectiveness vary as the diversity of goals, priorities and labour force abilities impact the outcomes of each program. Measuring the effectiveness of each workplace training program would limit the applicability of this study as the specificity of the training limits broader application. Once a strong workplace-training infrastructure is in place and regional coordination is developed, best practices will be easier to identify. The effectiveness criterion is evaluated relative to the participation of two main actors, employers and employees.

Employer

This criterion measures the likelihood that an employer will provide a skills development training program. Barriers to employer sponsorship of workplace training include:

- Financial costs
- Lack of government support
- Unknown results
- Fear of poaching
- Loss of manpower while training².

The effectiveness criterion assesses the likelihood that the alternative will reduce or eliminate the barriers to the creation of employer sponsored skills development programs.

² Adult Learning Knowledge Centre (2006) Power Point Presentation

Employer actions are based on employer participation rates revealed by the case studies and literature.

Employee

This criterion measures the likelihood that an employee will participate in a workplace-training program based on the accessibility of the program to those in the labour force. Barriers to employee participation include:

- Opportunity costs
- Transportation problems
- Multiple work and family responsibilities
- Lack of time

The employee participation criterion assesses the likelihood that the alternative addresses or eliminates these barriers to participation.

6.5 Scaling

The criteria are each assigned a ranking of low, moderate or high and a corresponding numerical value is assigned as follows:

- Low = 1 Point
- Moderate = 2 Points
- High = 3 Points

A “low” rating describes an alternative that does not meet the criterion. If an alternative receives a “moderate” rating, it means the alternative meets the criterion, but there is some uncertainty regarding the alternative’s strength. Lastly, if an alternative receives a rating of “high” it means that the alternative meets the criterion with no uncertainty as to the strength of the policy.

The cost effectiveness and the administrative ease criteria are ranked inversely. For example, when considering cost effectiveness, a high rank indicates a lower cost and a score of 3,

a low score signifies a higher cost and a score of 1. The total score for each option is calculated and compared against a maximum score of 15 (each criteria has a maximum score of 3). Table 6.2 summarizes the criteria definitions and measures used to assess each of the policy alternatives.

Table 6.1 Criteria Definitions and Measurement

Criteria		Definition	Measure
Budgetary Cost		Relative to the status quo, what is the budgetary cost of implementing the policy?	<p>Low: Costs are well above the status quo in the short and long term</p> <p>Moderate: Costs moderately close or equal to the status quo</p> <p>High: Costs are lower than the status quo</p>
Administrative Ease		How complex is the policy to implement?	<p>Low: The policy requires the development of new administrative systems or tools</p> <p>Moderate: The policy requires a small amount of administrative changes</p> <p>High: The policy can be implemented with the existing administrative framework</p>
Effectiveness	Employers	What is the likelihood that the employers will sponsor a workplace-training program?	<p>Low: It is unlikely that employers will participate in the program</p> <p>Moderate: It is somewhat likely that employers will participate in the program</p> <p>High: Employer participation is expected</p>
	Employees	What is the likelihood that employees will participate in the workplace-training program?	<p>Low: It is unlikely that employees will participate in the program</p> <p>Moderate: It is somewhat likely that employees will participate in the program</p> <p>High: Employee participation is expected</p>
Political Feasibility		Based on the public response, is it likely that the BC government would choose to implement the policy?	<p>Low: The policy is expected to receive strong political opposition</p> <p>Moderate: the policy is expected to receive mild political opposition</p> <p>High: the policy is expected to receive approval from the provincial government and relevant ministries</p>

Chapter 7: Evaluation of the Alternatives

The following subsections evaluate the four policy alternatives: tuition free ABE, training tax credit, provincial workplace training fund and the 1 Percent Law on the basis of the five criteria presented in Chapter 6.

7.1 Adult Basic Education

Budgetary Costs: Moderate

The ABE program automatically receives a ranking of moderate, as there are no incremental budgetary cost implications for the status quo. The annual cost of providing the program is approximately 91 million dollars. By dividing the total annual cost of the program by the total number of program completers the average program provision cost per person is \$4550 (see Figure 7.1). All other policy alternatives are evaluated in relation to the annual costs of providing the current program and the average cost per certified participant. Programs that decrease the budgetary costs relative to the status quo receive a high rating. Programs that are more expensive and entail additional budgetary costs above the status quo budget are assigned a low rating.

Figure 7.1 Average Cost of Providing the Program to each individual Completer

$$\frac{\$91,000,000}{20,000 \text{ Completers}} = \$4,550 \text{ per person}$$

Effectiveness:

Employer Sponsorship: Low

This criterion is assigned a *low* rating as employers are unlikely to provide their employees with the support they need to attend a formal training program. Employees attending formal learning programs such as the ABE program often require time off to attend the off-site training and study possibly affecting the productivity of the firm and financial support to cover the loss in wages, additional travel expenses, learning materials and in many cases child care.

Employers may also be unlikely to support the acquisition of general transferable skills in a setting outside the workplace as employees may be enhancing their skills to pursue alternative career paths (Stevens, 1996). This is not to say that employers will not support the development of general transferable skills in their own workplace-training program. Employers are likely to support general skills development in the workplace that are embedded into job specific training programs without the loss of production or increased financial burden.

Employee Participation: Moderate

According to the ABE Evaluation Survey results, 56 percent of ABE learners were employed prior to entering the program, and only one third of participant reported job skill upgrading as their reason for enrolling reflecting a *moderate* level of employee participation (Ministry of Advanced Education, 2005). However, studies show that employee participation in training increases when it is provided in the workplace³. Training in the workplace eliminates many of the barriers to adult education. In-house training is more convenient for employees to

³ (see HRSDC's "Building Essential Skills in the Workplace," 2005)

attend, employers are more likely to pay the employee while they are attending, there are no additional transportation costs, and the skills they learn are directly relate to the skills their employers need, improving long-term employment and promotional opportunities.

Administrative Feasibility: Moderate

The other policy alternatives will be measured against the status quo to determine their relative administration feasibility. However, increasing the administrative capacity of the current policy may be required in order to collect more detailed employment outcome data. Currently, the ABE Evaluation Survey does not collect the information necessary to evaluate employment outcomes in a meaningful way. For example, the survey reports on the employment rates of the student group before entering the program and the employment rates of the same student group after they complete or leave the program. Measuring employment ratios does not reveal the employment impact of the program as the majority of students were employed before attending the program.

To assess the program outcomes, more detailed individual employment information should be collected, and a comparison made between the characteristics of employment (wage, title, hours worked) both before and after the student completes the program. This type of data could be analyzed to determine if a person has gotten a better job because of the program. To facilitate the collection of additional information, the Ministry of Advanced Education and Labour Market Development may require additional staff to handle the collection or analysis of the new data.

The lack of employment information has resulted in the assignment of a “moderate” rating, as program outcome information is incomplete without the collection of more detailed employment data.

Political Feasibility: Moderate

The provincial government and the Ministry of Advanced Education and Labour Market Development have received a positive response to its implementation of tuition free ABE programs and are considered a leader in the provision of adult education. However, if IALS ratings do not increase, the provincial government will not meet its goal of making BC the most literate jurisdiction in North America by 2015. In addition, ABE programs are based on learner preferences, meaning that each adult learner chooses the programs and course they want to take. Currently, the ABE program does not offer any incentives for learners to choose a learning path that will decrease the impacts of a skill shortage.

This policy has not been criticized by BC's business community. Existing ABE literature does not reveal strong business opposition or support for the program.

Due to the uncertainty of the program outcomes and an unknown business community response, the political feasibility of BC's ABE program is assigned a "moderate" rating.

7.2 Expanded Training Tax Credit

Budgetary Costs: Moderate

Expanding this alternative to include non-trade based industries without redirecting funds from the ABE program would significantly increase the overall monetary costs to the Province of British Columbia. However, the BC Government could realize a cost savings through this policy, as training costs are shared by several stakeholders.

TTC training costs are shared by the provincial government, businesses, industry and employees. The BC government provides funding to the Industry Training Authority to manage the industry training system. Industries, impacted by skills and labour shortages, invest in promotional tools to increase enrolment in industry training programs. Employers cover the costs of providing training and pay wages to apprentices while they participate in on-the-job learning.

Apprentices and trainees typically cover additional costs such as tuition, books, tools and other incidental expenses. In addition, it is likely that some employees who previously utilized ABE programs would be able to receive the training and skill upgrading they seek through the provision of in-house training decreasing the funding required to maintain existing ABE programs.

In addition, the cost of providing training per completer through the TTC program is significantly less than providing skill upgrading and training through the ABE program. The average cost to provide ABE to each person that completes the program is \$4550, which is much greater than the \$1875 it costs to provide training to each completer through the current TTC program (see Figure 7.2). Redirecting a portion of the ABE budget to the TTC could potentially decrease the burden on ABE programs while increasing the availability of in-house training throughout the province.

Figure 7.2 Average Cost of Providing the Program to each individual Completer

$$\frac{\$90,000,000}{48,000 \text{ Completers}} = \$1,875 \text{ per person}$$

Effectiveness:

Employer Sponsorship: High

Trades-based employers can apply to receive a training tax credit for providing apprenticeship training, whereas non-trades based employers receive no incentive from the provincial government to support or invest in training. Since the implementation of the TTC program the number of employers providing apprenticeship training has increased by 18 percent. Expanding access to the TTC program to non-trade based industries is likely to coincide with a substantial increase in TTC applications, as employers that currently sponsor workplace training

would become eligible. In addition, the TTC incentive may encourage employers that had previously not provided workplace training to do so.

Employee Participation: Moderate

By increasing the number of employers sponsoring apprenticeship training, apprentices are more likely to find apprenticeship training opportunities. Similarly, the TTC provides an incentive to employers to hire more apprentices than they may have without the program, as training costs are subsidized by the training tax credit. More employers and apprenticeship positions increases labour force accessibility to training.

Formal on-the-job training also reduces several barriers to adult education. Employees enrolled in the apprenticeship-training program can learn while they earn, reducing the largest opportunity cost associated with academic and skill upgrading, lost employment and wages. Due to the on-the-job nature of apprenticeship training, apprentices do not have to pay for additional travel costs, and time constraints are significantly reduced. However, apprentices are responsible for some of the costs associated with their training including the cost of textbooks, other learning materials and tools not provided by the employer. Although apprentices are required to pay additional costs, the ability to maintain full time paid work while learning, greatly decreases the likelihood that these costs will remain a barrier to enrolment.

Administrative Feasibility: Low

Employer sponsors and apprentices must register with the Industry Training Authority (ITA) to qualify for the Training Tax Credit. The ITA's registration system requires employers meet a standard of experience and expertise. Employers are to provide training in a variety of skills, but the means in which they do so is self determined. Although certification is designed to reflect a pre-determined set of skills, there is no method of evaluating the effectiveness of the training aside from annual completion exams provided by the ITA. Without regulating the means of apprenticeship training, it is unlikely that there will be uniformity in the skills of completing

apprentices (Johncox, 2001). The ITA may require additional staff to conduct on-site assessments of apprenticeship training to ensure that employers are providing the training required to apply for the training tax credit.

Extending the TTC program to non-trade based industries would require a great deal of analysis to develop industry standards for each additional industry included. To develop industries standards for those presently excluded from the TTC program the ITA would need to increase its administrative capabilities substantially. However, once industry-training standards are created the ITA would only need to maintain the administrative capabilities required to accommodate the additional workload. As extending the TTC program would require the ITA to substantially increase its administrative capacity this criterion is assigned a low rating.

Political Feasibility: Moderate

The Provincial Government and the Industry Training Authority have received a positive response from trades-based employers, apprentices and those that rely on the services they provide (developers, municipal governments, private citizens etc). The provision of the TTC program is perceived as an active response by the provincial government to address current and anticipated skills shortages in trades-based industries.

The demographic realities of an ageing population are believed to impact the trades sector particularly hard, but it is generally understood that all industries will soon be affected by this same reality⁴. Expanding the TTC to non-trades based industries is likely to be supported by the majority of business owners in BC, as it would provide a financial incentive for employers to develop and provide workplace-training programs. Employers that are currently hiring under qualified employees because of a skill and labour shortage would be able to subsidize the cost of the training they need provide to improve their employee's skill levels.

⁴ See BC Chamber of Commerce "BC Survey Points to Major Skills Shortage" 2009, and "2010 Job-skills-Gap Analysis" 2005.

The TTC program alone, however, is unlikely to increase the basic literacy skills of the apprentices who participate. Apprenticeship training utilizes a “learning while doing” approach, where students learn by mimicking the actions of a certified trades person, there is minimal in-class formal learning time to develop the basic literacy skills of apprentices. It is also important to remember that apprentices are paid employees, and the needs of the employer often dictate the type of training apprentices receive. In times of economic boom, apprentices are often required to assume the responsibilities of a certified trade person, leaving little time to improve their essential skills. The lack of formal learning means that the TTC is unlikely to increase IALS score levels without embedding essential skills training into the apprenticeship-training curriculum.

7.3 Provincial Workplace Training Fund

Budgetary Costs: Low

The costs of providing workplace training through the Provincial Workplace Training Fund are shared between the provincial government and the businesses that provide the training. The provincial government dedicates a lump sum to the Department of Labour and Workforce Development to support skill development and workplace training initiatives throughout the province. The funding amount dictates the number of people who can access workplace-training programs.

The Nova Scotia government currently covers the salary costs of the Education Field Officers and dedicates \$500,000 annually to the fund. This \$500,000 contribution has created workplace-training programs that serve over 1,100 employees, affecting Nova Scotia’s workplace training participation rates. The average cost of providing the program to employees served is approximately \$1000 per person, which is far below the cost of providing ABE programs to the same number of people (see Figure 7.3). If the Provincial Regional Training Fund were to be

implemented in BC, it can be expected that a larger provincial contribution to the fund would be required because of BC's larger population and greater regional distribution.

Figure 7.3 Average Cost of Providing the Program to each individual Completer

$$\frac{\$1,100,000}{1,100 \text{ Completers}} = \$1,000 \text{ per person}$$

BC has more businesses, a larger population and greater regional distribution than Nova Scotia. For this policy to have a noticeable impact on the provision of and participation in, the BC government would need to commit a larger sum to the fund. In addition, due to the physical size of BC and regional business distribution the number of Educational Field Officers required to support businesses is likely to impact the budget. To provide workplace educational support to business owners throughout the province it is likely that an Educational Field Officer will need to be assigned to each of BC's 16 college regional districts. Regional EFO's would provide employers with training support, and encourage local businesses, labour unions and adult education professionals to participate in regional labour market councils.

To provide a Provincial Regional Training Fund, and maintain the current ABE and TTC budgets, BC would have to increase their adult education budget enough to cover the salaries of the EFO's in addition to the amount they contribute to the fund. It may be possible to reallocate funding from the ABE program or the TTC program to cover the costs of providing this policy. If the BC government were willing to reallocate a small percentage of funding from the ABE and TTC programs this policy option would have no budgetary implications. However, it is cannot be determined if the BC government would be willing to reallocate funds from one adult education program to support another, and as such this criteria is assigned a low value.

Effectiveness

Employer Sponsorship: Moderate

Program start-up costs are cited as the number one barrier to implementing workplace-training programs (Canadian Auto Workers, 2006). Without incentives or government support employers are responsible for the majority of in-house training costs. The model of the Provincial Regional Training Fund was designed specifically to eliminate this cost barrier, as the fund covers the costs of a needs assessment and design of the training program based on each individual employer's needs. Employers are required to cover the cost of maintaining the program, however if they can show a need for training and can prove that they lack the finances necessary to fund the program they may apply to the fund for additional financial assistance. Reducing, and in some cases eliminating, both the needs assessment and curriculum design costs is likely to increase the number of employers providing workplace-training programs.

Reducing the largest barrier (training implementation costs) will most likely result in high program participation. However, program participation is limited by the amount of money available through the fund. If the fund is not large enough to accommodate all viable applicants, employers that do not receive financial assistance may choose not to provide a workplace-training program. As employer participation is dependent upon the size of the fund and the number of applicants this criterion receives a moderate rating.

Employee Participation: Moderate

In-house training is preferred by employees as it eliminates many of the opportunity costs associated with pursuing formal academic or skill upgrading training. Access to on-site subsidized training eliminates transportation costs, tuition fees and allows employees to retain employment while increasing their skills. This criterion is highly dependent upon employer provision of a

program, and as such this criterion is given a *moderate* rating because some employers, regardless of the policy, will choose not to provide workplace training.

Administrative Feasibility: High

Many of the administration requirements to implement the Provincial Regional Training Fund are already in place. Existing adult education infrastructure can be adapted to support the functions of the fund. The Ministry of Advanced Education and Labour Market Development (ALMD) in partnership with Literacy BC⁵ and regional community colleges, currently support BC's Regional Literacy Coordinators (RLCs). RLCs provide support to adult learners by raising awareness, coordinating regional events, and providing tutor training to community programs. RLCs, although colleges employees, are funded by the ALMD and their coordination is facilitated by Literacy BC. A workplace education partnership between the Ministry of Advanced Education and Labour Market Development, Literacy BC and the community colleges could support the Educational Field Officers in the same way as the Regional Literacy Coordinators.

Existing regional labour market infrastructure such as local Chambers of Commerce and Boards of Trade could create regional labour market committees comprised of business, labour unions and workplace training professionals. High representation from Chambers of Commerce and Boards of Trade would decrease the complexity of recruiting representatives. It is expected that this option would be well received by the Chambers and Boards of Trade as increasing incentives for workplace training has long been a priority of both bodies⁶. The adaptation of existing infrastructure would not require additional administration and as such, this criterion is assigned a *high* rating.

⁵ A provincial non-profit literacy organization.

⁶ See "Closing the Skills Gap 2008: The Economic Imperative of Addressing Skills Shortages and Wastage in British Columbia"

Political Feasibility: High

This criterion is assigned a *high* rating, as it is likely that implementing this policy would:

- Improve overall literacy levels
- Enhance the workplace skills of the labour force
- Address current and anticipated labour shortages
- Receive support from business and labour communities.

Attaining provincial government literacy goals will most likely depend on the amount the provincial government allocates to the Provincial Regional Training Fund. If the fund were sufficient to accommodate financial aid requests from the business community then a larger portion of the population would have access to workplace training programs. Additionally, programs supported by the fund could be required to embed essential skills into the workplace training that would likely, over time, increase provincial literacy rates.

Embedding essential skills learning in combination with on-the-job training would increase the skills of the labour force, addressing current and future labour shortages. Developing the essential skills of BC's labour force increases industry mobility, reduces the likelihood of unemployment resulting from industry change and creates an adaptable and competitive labour force. Providing financial incentives to employers to provide workplace training would allow the provincial government to stipulate the type of training employees receive. Workplace training programs could serve the needs of employers and while addressing the goals of the province.

The BC government is currently providing funding to a variety of small businesses through its Skills Plus pilot program. The program provides funding to the business wanting to embed essential skills training into their existing training programs. The Skill Plus approach is very similar to the Provincial Regional Workplace Training fund concept, the primary difference being that Skills Plus works with existing training programs rather than creating new ones. Skills Plus relies on the existence of a training program that can then be augmented to develop essential

skills. However, Skills Plus does not provide any incentives for the creation of new programs. The Provincial Regional Workplace Training Fund would allow for development of new training programs that have an essential skill component.

Large and small businesses are likely to support this policy for a variety of reasons. Small businesses that have historically not invested in workplace training programs because of the high implementation costs can apply to the fund for financial assistance to decrease or eliminate start-up costs. Large businesses that do not have workplace training in place can receive a free needs assessment and curriculum design. In addition businesses, regardless of size, that already provide workplace-training programs can work with the Education Field Officers to embed an essential skills learning component into their existing training curriculum.

Lastly, the entire process is informed by a complementary partnership. Regional councils that include government, business and labour representatives, would provide the provincial government with important labour market information. Labour market information could be used to develop solutions to current and anticipated changes in the labour market that directly or indirectly impact the council members. Labour market information is useful to target training programs accessible to employees working in retracting industries. For example, BC's forest industry is decreasing while employees with computer skills are in high demand. Providing training that enhances employees computer skills will allow former forestry workers to transition more easily into a new vocation.

7.4 1 Percent Law

Budgetary Costs: High

This policy is self-financing and as such receives a *high* rating. This alternative is fundamentally different from the other alternatives previously discussed because this alternative mandates compliance. Employers are responsible for investing 1 percent of their total payroll into

workplace training programs. Those that do not comply must pay a penalty equal to the equivalent of the required payroll investment. Businesses may choose to pay the one percent penalty rather than invest in a workplace-training program if they choose. For example, micro businesses that have only a couple staff members may decide that the opportunity cost of providing workplace training is far greater than the penalty they would have to pay for non-compliance.

Businesses that do not comply pay a pay-roll penalty to the Provincial Training Fund that is used to cover administration costs and support other workplace training initiatives. In addition, the provincial government may be able to decrease its current expenditures on formal adult education as the labour force has increased access to skills development programs.

Cost data on employer investment is not available, as employers are required to invest a percentage of their total pay roll. The amount employers invest in workplace training or contribute to the Provincial Training Fund is determined by the payroll percentage threshold. Business investment in Quebec is over 1 billion dollars annually. However, employers are not required to report on the number of employee accessing workplace training programs so it is currently not possible to determine the per person cost of training.

Employer Participation: High

Based on the compliance levels revealed in the Quebec case study, it is highly likely that employers will comply with the alternative. Mandatory investment in workplace training programs combined with penalties for non-compliance will force employers to decide between improving the skills of their staff or support a training fund that may give their peers a competitive edge.

Employee Access: Moderate

High compliance in Quebec has resulted in a large investment in workplace training. Combined, Quebec employers spend over 1 billion dollars annually on all workplace training programs making workplace-training programs highly accessible by the labour force. Employees in Quebec that do not have access to on-site training programs as a result of employer non-compliance are able to access centralized essential skills training programs supported by the Provincial Training Fund. Although employees have access to off-site training, barriers to employee participation in off-site training remain. Employees that access off-site training must pay for their own transportation, are unlikely to be paid a wage while attending, and are responsible for all costs not covered by their employer. The availability of both on-site and off-site training programs provides access to a large portion the Quebec's labour force, however barriers to off-site training remain, and as such this criteria is assigned a moderate rating.

Administrative Ease: Moderate

Businesses would be required to show in their audited financial statements that they invested a minimum of 1 percent of their total payroll on skills development training. Administration changes would include the addition of a line item for investment in training. The administrative burden could be handled by the Ministry of Finance as part of BC's current tax system. To determine exactly how the money is spent the provincial Auditor General could create a special task force once the program has been operating for a few years to perform training audits. The task force could interview employers and employees to determine the impacts and availability of the training.

Political Feasibility: Moderate

Unions, business and government collaboration ensures the development of a training policy acceptable to the majority of groups involved. The business payroll investment percentage

rate is determined through a consultative process. Small, medium and large businesses can provide input to policy makers on the policies predicted effects and the likelihood of compliance amongst the different businesses groups.

To ensure prolonged business and labour support for the policy, continuous stakeholder consultation methods are embedded in the policy. Sectoral committees and a provincial commission have the power to “develop the regulatory process as experience with the legislation is acquired” (Duranleau, 2000, p. 29). Recognizing the constant need to reevaluate and adjust the policy works toward achieving high business and labour support, increasing the likelihood of compliance.

Compromises between stakeholders is often the result of collaboration, for example, Quebec employers agreed to a mandatory 1 percent investment rate, on the condition that the policy allows employers to determine their own training method. However, without set training requirements, the provision of literacy and essential skills training would be at the discretion of each individual employer. This criterion is assigned a *moderate* value, as it is likely to receive employer support but has an unknown effect on the literacy and essential skills of the labour force.

7.5 Policy Evaluation Matrix

The analysis of the options is presented in Table 7.1; the table illustrates how each option scores on the basis of the criteria and presents the sum of the scores. However, the highest score does not necessarily mean that it is the preferred option. Score values between 1 and 3 assigned to each criterion are not weighted in any way. If BC’s provincial government place greater “weight” on one measure, such as budgetary costs, then a low criterion score may result in the rejection of an option even if the option score high on the other criteria.

Table 7.1 Policy Matrix

		Status Quo	Policy Alternatives		
Criteria		ABE Program	Expanded TTC	Provincial Training Fund	1% Law
Budgetary Costs		Moderate (2)	Moderate (2)	Low (1)	High (3)
Effectiveness	Employers	Low (1)	High (3)	Moderate (2)	High (3)
	Employees	Moderate (2)	Moderate (2)	Moderate (2)	High (3)
Administrative Feasibility		Moderate (2)	Low (1)	High (3)	Moderate (2)
Political Feasibility		Moderate (2)	Moderate (2)	High (3)	Moderate (2)
Total Score		9/15	10/15	11/15	13/15

Recommendations

As Table 7.1 illustrates, the Expanded TTC and the 1 Percent Law policy options produce the most desirable results with regard to effectiveness of increasing labour force accessibility to training. However, due to the low administrative feasibility of the TTC, I recommend the BC government implement the two highest scoring alternatives, the Provincial Training Fund and the 1 Percent Law simultaneously. Implementing both of these policy alternatives is likely to increase training accessibility to small, medium and large business employees.

The 1 Percent Law would require employers, with a specified payroll total, to invest in workplace training. BC's mandated investment percentage does not have to be the same as that applied in the Quebec model. Quebec's percentage threshold was determined after thorough government consultation with unions and employers. BC's employer percentage threshold should be developed through a similar consultation process. To coordinate consultation, I recommend the creation of regional stakeholder councils managed by local Chambers of Commerce and Boards of Trade. Regional councils should include representatives from government, labour and business ensuring equitable representation from each stakeholder.

Depending on the payroll threshold, a proportion of employers will be exempt from the policy. Quebec employers whose payroll was below the 1 million dollar threshold did not have to invest in workplace training. It is likely that small businesses will represent the majority of those with payrolls under 1 million dollars as they (by their very nature) have less staff, and smaller payrolls. Considering BC's large proportion of small businesses, small business exemption from the policy would limit the development and accessibility of workplace training programs, depending on where the threshold for business size is set.

Implementing the Provincial Workplace Training Fund simultaneously to the 1 Percent Law would allow small businesses to apply for financial assistance to develop workplace-training programs. Although the provincial government would initially be the primary financier of the fund, over time, this policy is expected to become self financing. High demand for the fund can be expected following the policy's initial implementation, but as the number of businesses not requiring financial assistance decreases over time, the Provincial Workplace Training Fund may be completely financed through the contributions made by businesses that fail to comply with the 1 Percent Law.

The creation of workplace training policies, from the implementation of the two policy alternatives, will require the creation of a supportive professional infrastructure. To support employers I recommend the creation of regional Workplace Training Coordinators (WTC), WTCs will have similar responsibilities to Educational Field Officers in Nova Scotia. WTCs responsibilities could include:

- Providing advice and support to employers on training policies and practices,
- Connecting employers with workplace training professionals,
- Conducting training needs assessments and develop curriculum,
- Contributing field expertise to the regional workplace training councils.

Unlike Quebec and Nova Scotia, BC does not currently have the professional capacity necessary to support the expected increase in demand for workplace training professionals as a result of implementing the alternatives. To increase the availability of workplace training professionals I recommend the creation of a Professional Workplace Training Certificate program. The Workplace Training Certificate program could be administered by, for example, The Training Group at Douglas College. The Training Group currently designs and delivers training programs in industry and business training. Workplace training professionals could receive college certification for completing the program.

To ensure the accessibility of certified and experienced trainers, my final recommendation is the creation of a Provincial Workplace Trainers List similar to that created in Quebec. The list, compiled by the Ministry of Advanced Education and Labour Market Development would provide employers with valuable trainer contact information. ALMD could stipulate the experience and educational requirements that trainers must satisfy to be included on the list to ensure industry-training standards.

Adoption of the 1 Percent Law and the Provincial Training Fund do not require the elimination of BC's ABE program. Maintaining tuition-free ABE programs allows many individuals to achieve their high school equivalency, improve their foundational literacy skills and promotes an attitude of continuous life-long learning. ALMD can continue to provide ABE programs as neither of the two suggested policy alternatives is likely to have a large impact on the adult education budget as mandated employer investment in training is self-self financing, and the cost of supporting a Provincial Training Fund expenditure would be small relative to the annual ABE budget.

In summation, I recommend:

- 1) The simultaneous implementation of two policy alternatives: 1 % Law and the Provincial Workplace Training Fund
- 2) The creation of regional workplace councils to be managed by regional Chambers of Commerce and Boards of Trade
- 3) The creation of regional Workplace Training Coordinator positions
- 4) The creation of a Workplace Training Certificate program
- 5) And the creation of a provincial Workplace Training Professionals List.

Conclusion

The preparedness of BC's labour market to deal with current and anticipated skill demand is highly dependent upon the accessibility of workplace and skills development programs. To ensure that the labour force has access to such programs, employer provision of workplace training needs to increase. Through a detailed case study analysis, this study has shown that policies that include employer incentives encourage new program development. Without the provision of program incentives, it is likely that employers will remain reluctant to invest in training.

BC's current ABE and TTC policies have made accessibility to specific types of training (trade-apprenticeships and basic literacy) more accessible to the labour force. However, without adjustments, the TTC will continue to provide training incentives to trades-based employers only. Extending the TTC is likely to increase labour force access to training, but low administrative feasibility and high budgetary costs restrict the possible extension of this program. ABE programs, although effective, remain inaccessible to many in the labour force due to the high opportunity costs of attending formal off-site learning. However, maintaining ABE is important as it allows many adult BC residents to upgrade their skills and attain a high school equivalency.

This study has shown how the creation of additional employer incentives that encourage or mandate employer investment in training will increase labour force accessibility to skill development programs. Improving labour force access to training will enable BC's workforce to meet current and future skill demand. Developing the skills of BC's labour force is in the best interest of BC residents, the provincial government and employers. With a highly skilled labour

force, BC can remain competitive in both national and global economies ensuring continuous growth and prosperity.

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Appendices

Appendix 1 - Apprenticeship and Red Seal Program List

Recognized Apprenticeship and Red Seal Program Listings

- Aggregate Plant Operator
- Agricultural Equipment Technician "Red Seal"
- Aircraft Maintenance Technician
- Aircraft Structural Technician
- Appliance Service Technician "Red Seal"
- Arboriculturist (Urban Forestry)
- Architectural Sheet Metal Worker
- Asphalt Paving/Laydown
- Asphalt Plant Operator
- Automatic Transmission Service Technician
- Automotive Glass Technician
- Automotive Machinist
- Automotive Painter (Automotive Refinishing Technician) "Red Seal"
- Automotive Radiator Manufacturer and Repairer
- Automotive Refinishing Prep Technician
- Automotive Service Technician "Red Seal"
- Automotive Upholsterer
- Automotive Wheel Alignment and Brake Service Technician
- Baker "Red Seal"
- Barber
- Boilermaker (Construction Boilermaker) "Red Seal"
- Boom Truck Operator - Folding Boom 22 tonnes and under
- Boom Truck Operator - Folding Boom Unlimited tonnage
- Boom Truck Operator - Stiff Boom 40 tonnes and under
- Boom Truck Operator - Stiff Boom Unlimited tonnage
- Bricklayer (Mason) "Red Seal"
- Building Envelop Technician
- Cabinet Maker (Joiner) "Red Seal"
- Cable Splicer
- Carpenter "Red Seal"
- Communication Technician
- Community Antenna Television Technician
- Concrete Finisher (Cement Mason) "Red Seal"
- Concrete Plant Operator
- Construction Formwork Technician
- Cook "Red Seal"
- Dairy Production Technician
- Diesel Engine Mechanic
- Diesel Fuel Injection Mechanic
- Domestic/Commercial Gasfitter
- Domestic/Residential Certified Geothermal Technician

- Domestic/Residential Certified Heating Technician
- Drywall Finisher
- Electric Motor Systems Technician (Winder Electrician) "Red Seal"
- Electrician, Construction "Red Seal"
- Electrician, Industrial "Red Seal"
- Electronics Communications Technician
- Electronics Technician
- Electronics Technician (Consumer Products) "Red Seal"
- Electro-Plater
- Elevator Mechanic
- Embalmer & Funeral Director
- Floor Covering Installer "Red Seal"
- Florist
- Forklift Mechanic
- Funeral Director
- Glazier "Red Seal"
- Graphic Arts - Bookbinder 1
- Graphic Arts - Litho Pressperson (Web, Sheet Fed, Rotary & Gravure)
- Hairstylist (Cosmetologist)
- Hardwood Floorlayer
- Heavy Duty Equipment Technician (Mechanic) "Red Seal"
- Heavy Equipment Operator
- Hydraulic Crane Operator
- Hydraulic Service Mechanic
- Inboard/Outboard Mechanic
- Industrial Engines and Equipment Partsperson
- Industrial Instrument Mechanic "Red Seal"
- Industrial Mechanic (Millwright) "Red Seal"
- Industrial Warehouseperson
- Insulator (Heat and Frost) (Heat and Frost Insulator) "Red Seal"
- Ironworker Generalist (Ironworker) "Red Seal"
- Ironworker - Reinforcing "Red Seal"
- Landscape Horticulturist
- Lather (Interior Systems Mechanic) (Wall and Ceiling Installer) "Red Seal"
- Locksmith
- Log Builder
- Logistics and Distribution Person 2
- Logistics and Distribution Person 3
- Lumber Manufacturing Industry - Benchperson
- Lumber Manufacturing Industry - Circular Sawfiler
- Lumber Manufacturing Industry - Sawfitter
- Machinist "Red Seal"
- Marine Engine Mechanic
- Marine Mechanical Technician
- Marine Repair Technician
- Meatcutter
- Metal Fabricator (Fitter) "Red Seal"
- Meter Technician
- Mobile Crane Operator - Hydraulic 80 tonnes and under
- Mobile Crane Operator - Hydraulic Unlimited tonnage
- Mobile Crane Operator - Lattice Boom Hydraulic Crane "Red Seal"

- Mobile Crane Operator - Lattice Boom Friction Crane "Red Seal"
- Motion Picture & Theatre - Grip
- Motion Picture & Theatre - Set Dresser
- Motor Vehicle Body Repairer (Metal & Paint) (Automotive Collision Repair Technician) "Red Seal"
- Motorcycle Mechanic "Red Seal"
- Moulder and Coremaker
- Oil Burner Mechanic (Residential) "Red Seal"
- Outdoor Power Equipment Technician
- Painter and Decorator "Red Seal"
- Parts and Warehousing Person 1
- Partsperson "Red Seal"
- Piledriver and Bridgeworker
- Planermill Maintenance Technician 1
- Planermill Maintenance Technician 2
- Plasterer
- Plumber "Red Seal"
- Power Line Technician "Red Seal"
- Production Horticulturist
- Railway Car Technician
- Recreation Vehicle Service Technician "Red Seal"
- Refrigeration and Air Conditioning Mechanic (Refrigeration Mechanic) "Red Seal"
- Reinforcing Steel Installer
- Residential Building Maintenance Worker
- Residential Construction Framing Technician
- Residential Steep Roofer
- Rig Technician 1
- Rig Technician 2
- Rig Technician 3 "Red Seal"
- Roofer "Red Seal"
- Security Alarm Installer
- Sheet Metal Worker "Red Seal"
- Sprinkler System Installer "Red Seal"
- Steamfitter / Pipefitter "Red Seal"
- Telecontrol Technologist
- Tilesetter "Red Seal"
- Tire Repairer
- Tool and Die Maker "Red Seal"
- Tower Crane Operator
- Transport Refrigeration Mechanic
- Transport Trailer Technician (Commercial Trailer Mechanic) "Red Seal"
- Truck and Transport Mechanic(Commercial Transport Vehicle Mechanic) "Red Seal"
- Utility Arborist
- Water Well Driller
- Welder (Welder Level A or Welder Level B) "Red Seal"
- Welder Level C

Appendix 2- Essential Skills Descriptions

Essential Skill	Description
Reading Text	Understanding materials written in sentences or paragraph Scan for information or overall meaning.
Document Use	Finding, understanding or entering information in various types of documents, such as tables or forms.
Numeracy	Using numbers and thinking in quantitative terms to complete tasks.
Writing	Communicating by arranging words, numbers and symbols on paper or a computer screen.
Oral Communication	Using speech to exchange thoughts and information.
Working with Others	Interacting with others to complete tasks.
Continuous Learning	Participating in an ongoing process of improving skills and knowledge.
Thinking Skills	Finding and evaluating information to make rational decisions or to organize work.
Computer Use	Using computers and other forms of technology. Learn on the job.

(Source: Adapted from HRSDC “What are Essential Skills” 2008)

Appendix 3- IALS and ALL Level and Points Descriptions

IALS/ALL Levels, Points and Descriptions

IALS Level	Document	Prose	Numeracy
Level 1 0-225	Respondent can locate a piece of information based on a literal match or enter information from personal knowledge into a document. No distracters present.	Respondent can read short text to locate a single piece of information which is identical to the information given in the question or directive. No distracters present.	Respondent can understand basic numerical ideals. Tasks consist of simple, one-step operations such as counting and sorting dates.
Level 2 226-275	Respondent can match a single piece of information with several distracters present, cycle through document information; integrate information from various part of a document.	Respondent can locate a single piece of information in a text with several distracters present, integrate two or more pieces of information, and can compare and contrast easily identifiable information.	Respondent can understand basic mathematical concepts such as whole numbers, fractions, and can interpret simple geographical representations.
Level 3 276-325	Respondent can integrate multiple pieces of information from one or more documents and can interpret complex graphs and tables.	Respondent can make literal or synonymous matches between text and task information and can make matches that require low inferences.	Respondent demonstrates understanding of mathematical information represented in different forms such as: numbers, symbols, maps, graphs and drawings.
Level 4 326-375	Respondent can perform multiple feature matches, cycle through documents, and integrate information, requiring a greater degree of inference.	Respondents can perform multiple-feature matches, and integrate or synthesizes information from complex and lengthy passages requiring a greater degree of inference.	Respondents can understand a broad range of mathematical information of a more abstract nature represented in diverse ways. They can solve mathematical problems with multiple steps that require complex reasoning and interpretation skills.
Level 5 376-500	Respondent can search through complex displays that contain multiple distracters, to make high-level text-based inferences, and use specialized knowledge.	Respondent can search for information in dense text which contains a number of plausible distracters requiring a high level of inference and use specialized background knowledge.	Respondent can understand complex representations and abstract and formal mathematical and statistical ideas, embedded in complex texts and can integrate multiple types of mathematical information.

Appendix 4- Four Levels of Problem Solving

Problem Solving: Four Levels of Difficulty

Problem Solving Level	Description
Level 1 (0-250)	Respondents can make simple inferences, based on limited information. Can make simple connections, and is outcome directed.
Level 2 (251-300)	Respondent can evaluate alternatives. Reasoning may be incremental.
Level 3 (301-350)	Respondent can rank objects using provided criteria. Can determine action sequences and construct solutions. Reasoning is non-linear.
Level 4 (351-500)	Respondent can judge completeness, consistency, and/or dependency using multiple criteria. Respondent can reason from a meta perspective (looks at the whole picture).