

# ACHIEVING A HIGHLY SKILLED, HIGH-PERFORMANCE WORKFORCE IN BRITISH COLUMBIA

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## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

Ensuring the right quantity of workers with the necessary qualifications now and into the future has become a major concern for employers, industries and policy makers in British Columbia. The hypothesis of this paper is that achieving this goal will be an economic imperative over the coming decade and beyond.

The Business Council of British Columbia has introduced *Opportunity 2020*, an outward-looking, non-partisan initiative to help shape a positive vision and agenda for the province's economic future. As part of the Council initiative, this paper focuses on developing a "highly skilled, high-performance" workforce for BC by 2020. The purpose of this paper is to provide an overview of how BC is faring in terms of developing a skilled workforce and to offer a framework for moving forward on priorities over the next decade to ensure this goal and vision are achieved.

For purposes of this paper, "workforce development" refers to vocational and technical education and training at the secondary and post-secondary levels; and labour market, employment and human resources development programs in the public, private and voluntary sectors. It refers to preparation for work and preparation for or retention and advancement in an occupation, trade or profession.

University-level education, immigration, and labour force trends and gaps will only be briefly covered in this paper as they are subjects of other *Opportunity 2020* papers.

### **SITUATIONAL CONTEXT: DRIVERS OF CHANGE**

This section of the paper highlights major trends affecting workforce development including globalization, the BC Economy, productivity challenges, the importance of small business, population growth and aging, and unemployment. It also provides an overview of labour market demand and supply in BC, and identifies skills gaps. This section also briefly describes the policy context for workforce development programs and recent and current key workforce trends in BC.

Most importantly, given the temporal scope of this paper, some of the obvious continuing or emerging trends BC is expected over the next decade are:

- Increasing globalization and integration of economies;
- Continuing flow of professionals and skilled workers between countries;
- Increased aging of the population and workforce;
- Labour market flexibility and the adaptability of workforces will become increasingly important because of global and economic volatility and technological change;
- Along with increased volatility, we should expect at least another downturn or recession in Canada in the next decade, since we have experienced at least one in each of the previous four decades;
- Continuing pressures to improve productivity and competitiveness of companies and jurisdictions;
- Immigration will increase in its importance as the source of new labour supply;
- International, interprovincial and intraprovincial mobility and the assessment and recognition of skills and learning will continue to be an important competitive factor for economic growth;
- Attaining a high performance workplace and employer of choice status will become increasingly important for all organizations;
- Use of technology in the workplace will continue to increase and impact the nature of work;
- Environmental concerns and activities will become increasingly pervasive in our economy;
- Formal education and training will be increasingly important for preparing for workforce entry and maintaining workforce competence; and,
- Labour force diversity will continue to increase due to sources of population and workforce growth.

### **THE CURRENT STATE OF WORKFORCE DEVELOPMENT IN BC**

In addition to a high-level review of comparative international workforce indicators, this section reviews evidence of performance in the three areas of workforce development covered by the scope of this paper:

#### Formal Education and Training

- K-12 Vocational and Technical Education
- Post-Secondary Vocational and Technical Education
- Apprenticeship and Industry Training
- Private Career Training

#### Labour Market Development

- TILMA

- Interprovincial Mobility
- Federal-Provincial Agreements
- WorkBC
- Small Business Roundtable
- BC Employment Program
- Adjustment and Transition Programming

Employer-Based Human Resources Development

- Non-Apprenticeship Workplace Training
- Small Business Human Resources Management

Overall, the BC workforce development systems appear to be moving in the right direction and have collectively achieved many important results. Post-secondary education, high school initiatives, the ITA, labour market agreements, WorkBC and other programs in BC have responded to the tremendous economic and employment growth and technological change of the last decade.

However, many of the indicators of success represent “inputs”, “processes”, and “outputs” of education, training, employment, labour market and HR programs. In the final analysis, the true test will be the outcomes, the impacts, the long-term results of such activities. While these programs show increased participation and completion and lead to further education, certification and employment, do they ultimately create the major characteristics and comparative advantages of a strong labour market and workforce? Do they go beyond the “means in themselves” to achieve the powerful outcomes of improved competitiveness, productivity growth, labour market flexibility, and adaptation to change and transition?

In order to ensure a highly skilled, high-performance workforce, BC strategies need to move to “quality-based” indicators that are demonstrated to truly improve firm competitiveness, worker productivity, labour market flexibility, and workforce transition and adjustment.

#### **LESSONS FROM OTHER JURISDICTIONS**

This section briefly covers what we can learn from workforce development in other jurisdictions. It will draw from interesting trends in workforce development reforms in Commonwealth and European countries, including jurisdictions with newer systems and recent changes with comparable workforce sizes such as Ireland and New Zealand. Some of the key trends in vocational education and training are:

- The introduction or expansion of national qualifications frameworks;
- More systemic vocational education and training reforms, including a learning outcome orientation;
- Improving quality of and accountability for vocational education and training through results-management regimes;
- More focus on career counseling; and,
- The validation of non formal and informal learning.

Looking more specifically at industry training in other jurisdictions, this section identifies a number of international trends including such developments as modularization of training, competency-based assessment and training, increased efforts to start vocational training and apprenticeship in secondary school, flexible delivery of training, national vocational standards frameworks, financial incentives for employers, efforts to improve the quality and assessment of on-the-job training, and more industry driven/led involvement and ownership.

This brief review also singles out Alberta as a role model in three areas of particular relevance: a long-term strategy and multi-sector, multi-stakeholder planning and execution; apprenticeship and trades training; and several labour market information tools.

How effective have these developments been in terms of workforce development outcomes in each country? Overall, the quantity and variety of outcomes (i.e. credentials, employment, etc.) have increased significantly in jurisdictions such as Australia, New Zealand and Ireland over the last decade. Industry and employer involvement has been increased and sustained. Standardization and quality assurance of workforce development programs have improved. More young people and members of under-represented labour force groups are participating in training and employment. Also, improvements are apparent in the recruitment, utilization and recognition of the training/credentials/skills of immigrants in Australia. This brief review of international jurisdictions shows that BC’s workforce policies and programs in recent years and currently are consistent with many successful international systems.

### **CRITICAL SUCCESS FACTORS**

This section offers some critical success factors for attaining a highly skilled, high-performance workforce and workforce development strategies. It is based on the preceding review of and lessons learned from other jurisdictions, in the context of BC's key labour market challenges, the current state of workforce development in BC, and the performance of existing measures. These factors are clustered under nine themes, each with more details provided in the main body of this paper:

1. A Strategic Approach;
2. Evidence-Based, "Measurement" Culture;
3. Strategic and Tactical Information;
4. A Collective Approach Among Stakeholders;
5. Service Delivery;
6. Comprehensiveness;
7. Transferability;
8. Facilitation of Transition; and,
9. Inclusion.

These features of successful workforce development systems should be considered in developing a highly skilled, high-performance workforce for BC.

### **A STRATEGIC FRAMEWORK**

This section offers a strategic framework for workforce development in BC, including a strategic direction, principles, a framework for identifying and measuring progress, and options for action. The figure on the next page shows the relationship between workforce development, various levels of outputs and outcomes, and positive labour market performance in BC. The components of this framework are:

1. Environmental drivers;
2. Workforce development participants;
3. Workforce development;
4. Service providers of workforce;
5. Workforce development outputs;
6. Workforce development outcomes;
7. Labour market outcomes;
8. Economic outcomes.

In addition to the relationships and sequencing of these components, a key point of this framework is that workforce development in itself should be considered as a means to an end for public policy. The direct outputs and outcomes of workforce development are valuable and beneficial to participants, but they should not be considered as the ultimate ends. BC workforce development programs need to more directly lead to and empirically support the labour market and economic outcomes in this framework.

As part of the framework in this paper, a Vision Statement for British Columbia's workforce development is offered here as follows: ***A highly innovative, creative and competent workforce that is supported by high-performance organizations, a learning culture, career development and opportunities to maximize its contribution to productivity improvement and economic growth.***

In order to realize this vision, some fundamental labour market outcomes could be used as **strategic goals**. For example:

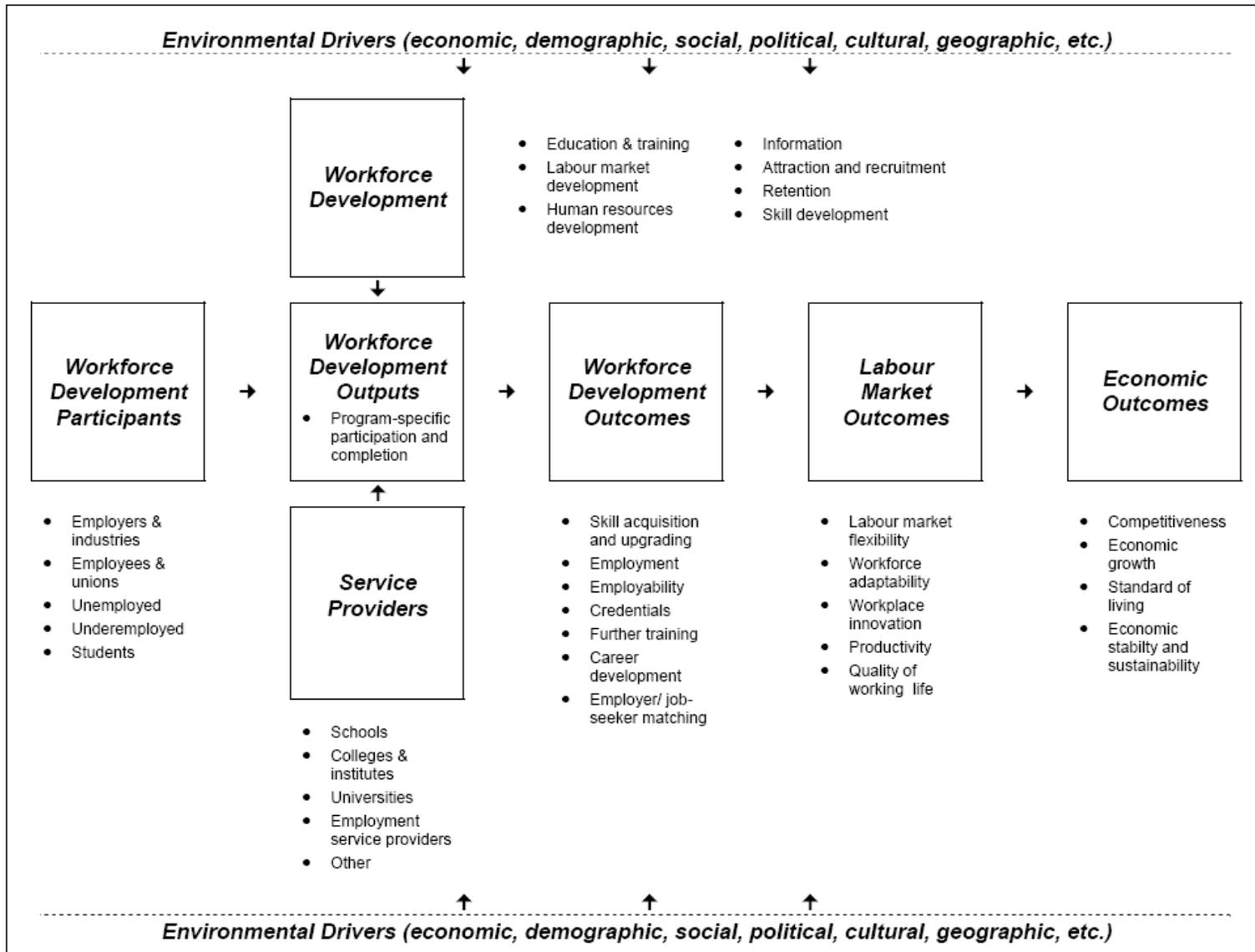
1. Increasing labour productivity;
2. Increasing labour market flexibility;
3. Increasing workforce adaptability to changing circumstances;
4. Increasing workplace, workforce and workforce development innovations;
5. Increasing the quality of working life.

These should be the ultimate goals of workforce development policies, and they would be supported by the types of workforce development outcomes in the framework.

Many of the critical success factors identified earlier can be used as **principles** with which to pursue this vision and goals. Additionally, a few key themes are important to single out are:

- Drivers of Productivity;
- High performance organizations;

**A Strategic Framework for BC Workforce Development**



- Sustainable Workforce Policies;
- Comprehensiveness; and,
- Clarification of and Agreement on Roles

#### **AREAS FOR OPTIMIZING WORKFORCE DEVELOPMENT**

While the mandate of this paper does not include offering a “wish-list” of recommendations, a set of areas or options where action might be considered is offered below.

1. Reflect priority labour market outcomes in the planning, design, measurement and evaluation of workforce development programs;
2. Directly link workforce development to improving productivity;
3. Directly link workforce development to supporting global competitiveness;
4. Encourage, incent and support private sector innovation in workforce development, particularly among small and medium sized enterprises;
5. Directly link workforce development planning with economic, business and succession planning;
6. Use benchmarking, performance measurement and program evaluation to develop or amend policies and programs;
7. Develop and use a coherent framework for financing workforce development that is consistently applied;
8. Increase support to maximize the utilization of talent among existing workers and unemployed;
9. Anticipate and prepare programming for workforce transition and re-employment; and,
10. Develop and make accessible a comprehensive labour market information program to support decision-making and resource allocation.

Immediate actions should include enlisting the help of the new Provincial Economic Advisory Council chaired by David Emerson to advise of workforce development priorities.

#### **CONCLUSION AND RECOMMENDATIONS**

In the recent past, BC post-secondary vocational and technical education, industry training, labour market development, and employer-based HRD programs have expanded in response to economic and employment growth. Many best practices and innovative initiatives have emerged, however, important gaps were identified in this paper in each category of workforce development programs in BC.

BC workforce development systems appear to have improved and be on the right track. However, many of the indicators of success for such programs are not outcomes, but rather inputs, processes, and direct outputs of education, training, employment, labour market and HR programs. Do these programs ultimately create comparative advantages necessary for a competitive and vibrant labour market and adaptable workforce? Do they go beyond “means” to achieve the necessary outcomes of improved competitiveness, productivity growth, labour market flexibility, and adaptation to change and transition?

As a jurisdiction and economy, BC and its citizens are well-positioned to benefit from and maximize economic growth in the long-term. This context includes many positive features of workforce development. Notwithstanding identified shortcomings and suggestions for change in existing BC workforce development policies and programs, there is no reason that existing and future resources – if used strategically and evidence-based – can go far in developing a highly skilled, high-performance workforce for our province.

A workforce development strategy will not work if it is led solely by the BC Government. With appropriate public policy climate-setting and facilitation and progressive reform in national policies, industry groups, employers, workers, labour groups, educators and community leaders have to work together to achieve this vision. The workforce development status quo will not be enough to achieve the vision provided in this paper. More strategic and innovative measures are needed to achieve labour market flexibility, workforce adaptability, productivity improvements, and international competitiveness.

#### **Recommendations**

1. Provincial and federal workforce development programming and funding should be focused on long-term workforce and economic requirements and be expanded, not reduced in the short-term.
2. All workforce development programming should reflect an evaluation framework – whether similar or not to the framework recommended in this paper – that focuses on important measurable workforce, labour market and economic “outcomes.”
3. The provincial government should develop a comprehensive worker adjustment strategy that integrates LMA, Community Development Trust and other programs and funding to address displaced, at-risk and vulnerable workers in hardest hit industries and regions throughout the province to facilitate retention of employment and re-employment.
4. For the longer term, economic planning and policies and supporting workforce development policies should reflect the new economy and knowledge-based, emerging growth industries in BC.

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## **1. INTRODUCTION**

“Perhaps the single most important thing that British Columbia can do to enhance its competitiveness is to focus on its people. People are the cornerstone of innovation, productivity and economic growth. The development of British Columbia’s human capital – enhancing the knowledge, skills and abilities of its workforce – is both a huge opportunity and a challenge requiring significant attention and investment of resources on the part of both government and industry” (BC Competition Council, 2006, p. vii).

### **1.1 Impetus**

Ensuring the right quantity of workers with the necessary qualifications now and into the future has become a major concern for employers, industries and policy makers in British Columbia. Key realities of this paper are that human capital development must be a major priority for British Columbia, and that achieving this goal is an economic imperative over the coming decades.

Up to 2008, British Columbia has been facing possibly its tightest labour market since World War II, with record low unemployment rates, and steady economic growth since 2001. We are not alone in this challenge – labour scarcity is a common issue facing employers throughout the industrialized world. Countless surveys and newspaper headlines point to a labour market “perfect storm” due to declining birthrates, increasing retirements, increased competition, rapid economic growth and sluggish productivity growth – all of which point to the importance of human capital.

Despite the current financial crisis and economic slowdown, it is unlikely these trends responsible for producing labour market pressures will change in the longer term. How can BC businesses, workers, governments, educational organizations and communities work together to ensure they have the skilled human resources with the necessary competencies available in the long term to keep the BC economy growing and vibrant?

Without preemptive action on workforce development in the short and long terms, BC’s economic and social well-being will be threatened. Optimal workforce development is an urgent issue.

### **1.2 Purpose**

The Business Council of British Columbia has introduced *Opportunity 2020*, an outward-looking, non-partisan initiative to help shape a positive vision and agenda for the province’s economic future. Key questions for *Opportunity 2020* are:

- What are the key trends that will define the BC economic environment in the next decade?
- How can BC, as a small, open economy, continue to prosper in a more competitive and increasingly knowledge-based global economy?
- What steps can be taken to improve upon current policies, institutions, attitudes, and practices to strengthen the foundations for prosperity in BC?

This *Opportunity 2020* paper focuses on developing a highly skilled workforce for BC during the next ten years to the year 2020. This paper focuses on the goal of developing a “highly skilled, high-performance” workforce, and is predicated on three key facts about BC’s economy:

- “Productivity growth is the most important source of long-term economic growth and is the only way to increase the living standards of Canadians in the long-term” (Jean-Francois Arsenault, 2008, p. 1).
- Canada and BC have relatively poor track records in productivity growth.
- Three-quarters of new jobs in the next decade will require some level of formal post-secondary education or training. A recent federal government scan of the BC labour market identified over forty “high-opportunity” occupations in BC, all but two of which are jobs in higher-skill level<sup>1</sup> or management categories (Andrew Taylor et al., 2008).

Research shows that high-performance organizations are more profitable and contribute more to GDP growth through the combination of high-value products, efficient technology, innovative processes, and a supported, engaged workforce. For example, in *Why Workplaces Matter*, Ryan identifies three key reasons why effective workplace practices or “high-performance work systems” are important in workforce development policy (Ryan, 2008, p.8):

- “...international evidence suggests that workplace returns on investment in innovation, technology and the application of acquired skills is greater where these are accompanied by complementary practices such as more flexible forms of work organization, employee involvement and strategic human resource management practices.”
- “...research evidence demonstrates that successful firms and workplaces have in place a distinctive set of management practices...based on the need for workplaces to operate in a holistic and sustainable manner. They also emphasize the contribution of employees to firm performance, and the need for them to be recognized and rewarded for this...”
- “...labour force trends have established a new imperative for development strategies that improve the attractiveness of workplaces. A more educated labour force has different expectations of work. Employees seek a high level of job satisfaction to a greater degree than previously, and express a greater desire for a balance....”

The purpose of this paper is to provide an overview of how BC is faring in terms of developing a skilled workforce and to offer a framework for moving forward on priorities over the next decade to ensure this goal and vision are achieved.

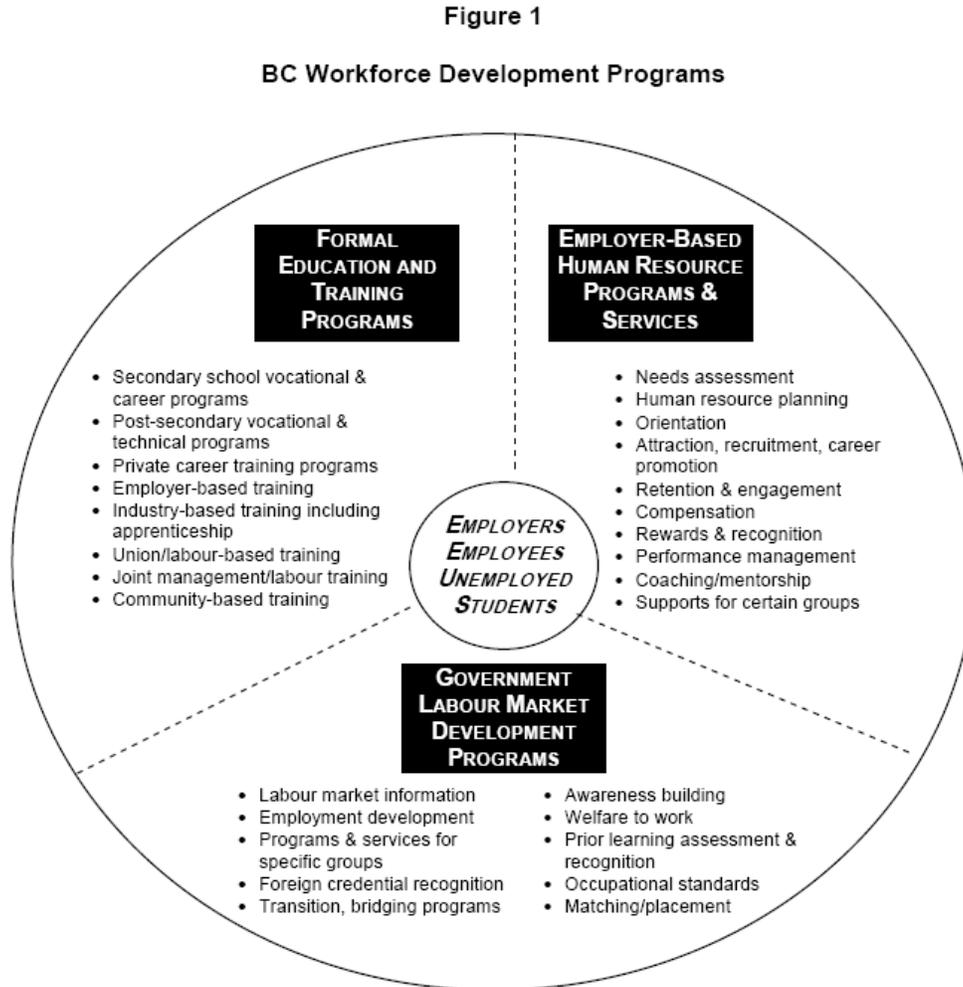
### **1.3 Scope**

Since this paper focuses on “*developing a skilled BC workforce*”, the concept, “workforce development” is used throughout. For purposes of this paper, “workforce development” refers to vocational and technical education and training at the secondary and post-secondary levels; and labour market, employment and human resources development programs in the public, private and voluntary sectors. It refers to preparation for work and preparation for or retention and

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<sup>1</sup> Occupations that usually require university education, college education, or apprenticeship training.

advancement in an occupation, trade or profession. It may be preparatory, remedial, general work skills, occupation or company-specific, advanced, specialized, etc. See Figure 1 below.



Since workforce development is not the only determinant of positive features of the BC workforce (i.e. other factors include productivity, flexibility, skill level, motivation, etc.), a broad definition of “development” is used here to include how workforce talents are utilized, how work is organized, etc. For instance, a New Zealand Department of Labour report suggests productivity growth rates are “influenced not so much by gross amount of investment in either human or physical capital, but by the way in which this investment is made use of within firms – different ways of working, how firms are organized, and how they use technology” (Rose Ryan, 2008, p. 4).

Furthermore, while workforce development may be considered an end in itself, this paper strategically looks at how workforce development contributes to critical economic outcomes such as economic growth, productivity, competitiveness and labour market flexibility.

This paper does not try to forecast future BC economic and labour force growth in a quantitative sense; and for purposes of this paper, university-level education, immigration, and labour force

trends and gaps will only be briefly covered in this paper as they are subjects of other *Opportunity 2020* papers. While these areas are definitely related to and sources of workforce development, they are not part of the terms of reference of this paper.

## **2. SITUATIONAL CONTEXT: DRIVERS OF CHANGE**

### **2.1 The Immediate Economic Situation**

This section focuses on broad economic, demographic and labour market drivers which affect the workforce and workforce development, but which are covered in more detail in other papers.

The global financial crisis and economic downturn have emerged and dramatically changed the current environment and at least the short-term future. These changes are important and are directly affecting economies and labour markets around the world. While this paper reflects sensitivity to these present forces, it does not dwell on the economic slowdown because the time horizon of this paper is the longer term. All indications are that strong demographic forces will play a continuing and increasing role in labour supply and demand for workforce development.

While the November 2008 drop of employment was the largest (in absolute terms) since the 1982 recession, it was relatively less severe for BC and the rest of western Canada. BC's Economic Forecast Council projects an average real GDP growth of 1.3 per cent in 2008, zero growth in 2009 and 2.8 per cent in 2010, in part buoyed by growth from the 2010 Winter Olympics; as well as an average of 2.6 per cent during 2011-2013 (Ministry of Finance, February 2, 2009). This paper will not analyze the impacts of the current economic shocks, but will reflect key workforce questions arising from the immediate context, such as:

- Will workers change their retirement plans?
- Will apprenticeship and other training completions be impacted?
- Will the downturn provide opportunities for businesses to build workforce development capacity and for workers to participate in training and development?
- Will employers revert to human resource habits of past downturns?
- Will the labour market shift in favour of employers and away from job seekers, including the "millennial" generations?
- Will there be impacts on government expenditures for workforce development?
- What can we learn about workforce development from past economic downturns?

### **2.2 Major Trends Affecting Workforce Development**

Notwithstanding the current the downturn of economies and markets, co-existing "perfect storm" factors have become increasingly apparent over the last decade and will continue in various manifestations to 2020. The focus should be on the long term, while actively anticipating and managing the shorter and medium terms. These co-existing factors include the following trends:

- Increasing global competition for business and labour, including the emergence of the so-called “BRIC” countries (Brazil, Russia, India, China) which represent 45 per cent of the global labour supply);
- Demographic shifts including the aging of our population and workforce;
- A declining birthrate and declining new workforce entrants (15 to 24 year olds);
- Lagging productivity growth.

The convergence of these trends has created intense labour market pressures and gaps such as skill and labour shortages and the under-utilization of groups of our population.

### **Globalization**

The global integration of economies and increased competition has encouraged the greater mobility of people and capital. In its *Compete to Win* report, the Competition Policy Review panel identified a number of global labour trends (2008, p. 8):

- International migration has increased markedly as people seek the best job opportunities.
- The availability of skilled talent is a key determinant of investment decisions and the location of economic activity. Many countries have increased their focus on immigration to acquire needed skills. The availability of skilled labour is a key to ensuring sustained growth in all regions and sectors.
- Slowing population growth and the aging of the population in developed countries will become an important factor in labour mobility. In the future, new skilled labour will come increasingly from developing economies.
- Going forward, being an attractive destination for skilled immigrants and foreign investment will be a critical success factor for developed countries.

In a brief on globalization and jobs, the OECD suggested that while economists have emphasized increased trade resulting from more open markets can create temporary adjustment for workers, it is also possible that globalization can increase their insecurity in the longer term by making labour markets more volatile. In jurisdictions that are more open to trade and foreign investment, companies may be more exposed to international economic developments and require more flexibility to adapt to global markets. The brief provides examples of policies which may help workforces adapt to global changes, including the following (June 2007, p. 7):

- Policies to enhance mobility in the labour market are also crucial to help individuals and firms to seize emerging opportunities in the world economy. Measures ensuring that workers flow from declining to expanding activities, as the economy restructures itself, are likely to be particularly important.
- Employment-oriented social policies can help to reconcile income security for workers with efficient mobility in the labour market.

- Skill development opportunities for low educated workers are also required to limit low-pay traps and the rise in earnings inequality, as skill requirements rise.

The Conference Board of Canada identifies the implications of globalization for our labour supply: “A single global market is emerging for everything from products to people....it creates a global market for talent, and companies across the world will compete for the best individuals. Talent will be drawn to centres of creativity anywhere in the world – the global talent magnets...” (Prem Benimadhu, Summer 2008, p. 10).

### **The BC Economy**

Over the period of the last several years, BC’s economy has performed relatively well in terms of GDP and employment growth and growth in capital projects and investments. BC has led the national GDP growth in recent years. While the current global economic situation will decrease labour market tightness to some extent in the short term, the economic downturn will not have the same impact as it would have in the past because of the strong demographic drivers. While there will be uncertainty regarding economic conditions over the next year or so, it is known for sure that one year from now and after each subsequent year, the BC workforce will be one year older, and more people will be retiring each year.

The labour market impacts of these global economic conditions may become more sector-specific as opposed to generally across all sectors. For example, while there may be some decline in residential construction, at the same time there will be continued labour market pressure on many health care occupations as the population continues to age.

### **Productivity**

One key exception to BC’s recent stellar economic performance – an area of particular importance to our economy that is supported by workforce development – is labour productivity. A litany of reports, studies and statistics have documented, first, Canada’s poor productivity growth compared to other industrialized countries; and second, BC’s lagging productivity growth compared to other provinces.

The Competition Policy Review Panel referred to the work of William Lewis of the McKinsey Global Institute. He measured employee productivity in individual industries in 13 countries over more than a decade, and found that productivity varies hugely around the world. More significantly, Lewis found that differences in productivity explain virtually all of the differences in national gross domestic product per capita (CPRP, 2008, p. 4).

According to the Centre for the Study of Living Standards, BC was last among provinces in labour productivity growth during 1987-2006 (reference). Our percentage productivity growth was less than half that of four other provinces including Alberta and Ontario. Key labour productivity challenges for BC include (BC Stats, 2008, pp. 4-6):

- Business sector GDP per hour worked in BC is well below the national average, and ranks sixth behind Alberta, Newfoundland, Ontario, Saskatchewan and Quebec.
- Productivity growth in BC since 1997 has lagged behind almost every other province.
- GDP per hour worked in the goods sector is well below the Canadian average, and is falling. In construction, GDP per hour worked, which is already lower than average, is falling when labour productivity was improving in the industry in other parts of the country.

Referring to BC's labour productivity woes, the BC Stats paper recognizes the importance of measures to improve productivity:

“This means that employers could be facing, demographically-driven labour shortages in the future, regardless of prevailing economic conditions. Labour supply constraints could hamper the ability of firms to produce goods and services....The other way to cope with labour supply constraints is by improved productivity. This can be done by changing the processes or technology used to produce goods and services. ...Finding ways to use existing resources more efficiently – by working ‘smarter’ – is another option...” (BC Stats, 2008, pp. 1-2).

In a study by Proudfoot Consulting (2008), 1,276 managers around the world were asked to identify the most critical barriers which are preventing their companies from improving productivity. The top six global barriers identified are:

1. Staff shortages and insufficient labour pool (27.4%);
2. Internal communication problems (25.1%);
3. Legislation and regulation (21.9%);
4. Low employee motivation and morale (21.2%);
5. High staff turnover rates (19.9%); and,
6. Quality of supervisors (19.6%).

Proudfoot researcher identified four “levers” of productivity improvement: effective management; the development of the workforce; clear communication; and, targeted training.

Another economic factor related to the productivity challenge in BC is the increasing pace of global technological change, both in technological inputs into the production process itself but also in the products and services.

Developing a productivity strategy for BC should be an important part of an economic agenda. As implied earlier, productivity improvements may be the only means to sustain government-funded services that are affordable to taxpayers over the coming years.

### **Small Business**

Another economic and labour market trend in BC has been the growth of small businesses<sup>2</sup>. This is a strategically important factor for workforce development, given that 56 per cent of private sector jobs in BC in 2007 were in small businesses. BC led Canada (49.6 per cent) in this regard, and also had the highest proportion of self-employed workers, at 18.5 per cent versus the national average of 15.5 per cent (BC Stats, October 2008). A growing and vibrant small business sector is and will be a critical success factor for a healthy BC economy. In order to succeed in today's context, small businesses need to effectively manage and develop their workforces. Research by the BC Chamber of Commerce (2006), the Canadian Federation of Independent Business (2006) and others shows clearly that a small business capacity for human resource development is key determinant of profitability and growth. This has implications for the design of workforce initiatives in reaching out to support small business owners and employees, which will be discussed later in this paper.

### **Population Growth and Aging**

Driven by lower fertility rates and the aging baby boomer cohort, a significant change in age structure of BC's population is occurring and will continue over the coming decades. According to the Urban Futures Institute, the 50 years old plus population will grow by 44 per cent in BC between 2005 and 2020 (637,800 more) compared to a two per cent decline in the 18-29 year old population (21,900 fewer) (Ramlo, 2006). In its *A Perfect Storm* report, the Urban Futures Institute concluded that Canada would have to increase its immigration levels almost three-fold to an average of 720,000 a year (from the then current 246,000) for the next 50 years to ensure our country has enough workers (The Urban Futures Institute, 2006).

Over the last five years net interprovincial migration to BC has been growing to the extent it led Canada in 2007 (including Alberta), with a net of 13,400 people coming from other parts of the country. This represented an increase of 31 per cent over 2006. Immigration to BC has become an increasingly important part of net population growth. According to BC Stats, by 2011 immigrants will be a primary source of new workers in BC; and by 2022 net migration will account for all net growth in the population (BC Stats, 2008).

Important retirement trends that are expected to increase are phased retirements, delayed retirements, and leaving retirement to go back into the workforce. Phased retirement is likely to become more common in Canadian companies over the next few years according to a recent survey by Hewitt Associates. Forty percent of organizations surveyed see phased retirement as being of "critical" or "high importance" in the pursuit to retain employees nearing retirement (Andrea Davis, November 25, 2008); another survey found 42 per cent of Canadians over 40 are considering deferring retirement by nearly six years (Desjardins Group, 2008).

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<sup>2</sup> BC Government definition: "A business with fewer than 50 employees or operated by a self employed person with no paid help."

As cited by the Atlantic Institute for Market Studies, a former director of an aging initiative predicted, “[o]n a global scale, the major social crises of the twenty-first century will be the by-product of labour shortages” (J.D. McNiven, 2008, p. 5).

### **Unemployment**

Over the last several years, BC’s unemployment rate has declined dramatically and has together with Alberta and other western provinces been among the lowest in Canada. BC’s unemployment rate has been below the 5 per cent level since 2006, as low as 3.8 per cent. Most of the province’s major occupational categories had unemployment rates in the 1 to 3 per cent range in most of 2008 (BC Stats, December 2008). While Trades, Transport and Equipment Operators (9.0 per cent), and Occupations Unique to Primary (9.2 per cent) and to Processing, Mfg and Utilities (9.8 per cent) unemployment has ballooned in BC by July 2009, unemployment in other occupations remains relatively low: Management (4.6 per cent), Health (2.0 per cent), Social Science, Education, Govt. Service and Religion (3.1 per cent), and Art, Culture, Recreation and Sport (2.8 per cent). Unemployment in BC in July 2009 reached 7.4 per cent, the highest in almost five years, but still below the national rate of 8 per cent (BC Stats, August 2009). The Business Council expects a continuing structurally tight labour market coming out of the current slowdown.

### **2.3 The British Columbia Labour Market and Workforce**

In order to position workforce development in the context of the BC labour market, this section briefly highlights recent labour market trends, keeping in mind a separate *Opportunity 2020* paper will address labour market trends in detail.

#### **Labour Demand<sup>3</sup>**

Since 2002, BC has exceeded the Canadian average in terms of percentage employment growth, particularly in the 2005-2008 period (Statistics Canada, 2008). From the year 2000 to August 2008, BC’s economy created over 393,000 jobs, a 20 per cent increase or an average of almost 2.6 per cent per year. This growth was driven by job creation in Construction, Trade, Other Services, Health and Social Services, Professional/Scientific/ Technical Services, and Education.

Employment in all major occupational categories saw growth during 2000-2008 with the exception of Occupations Unique to Processing, Manufacturing and Utilities. The single largest contributors to job growth were Trades, Transport and Equipment Operators (39.5%), Sales and Service (19.6%), and Business, Finance and Administration (26.6%).

Looking forward to 2017, industries with the highest growth rates are expected to be Health and Social Assistance (2.6%) and Professional, Scientific and Technical Services (2.6%). Health Care and Social Assistance, Professional, Scientific and Technical Services, Accommodation, Food

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<sup>3</sup> The labour demand figures and projections in this section are from (respectively): BC Stats, *Labour Force Tables*, September 2008; and BC Ministry of Advanced Education and Labour Market Development, *Ten-Year Employment Outlook for BC, COPS BC Unique Scenario, 2007-2017*. 2009..

Services and Other Services, and Wholesale and Retail Trade are projected to provide the largest *amounts* of new jobs. Goods-producing sectors (i.e. Manufacturing, Primary sectors, Utilities) are forecasted to provide the least number of new jobs in BC during this period.

It should be noted that these forecasts exclude replacement jobs or jobs created by attrition, which will represent 62.4 per cent of total openings. According to the BC Government, in addition to the 329,890 new jobs that are forecasted to be created to 2015, another 546,470 jobs will open due to attrition, for a total of 876,360 job openings.

While the Health, Natural and Applied Sciences, and Arts/Culture/Recreation/Sport occupational categories are expected to grow at the fastest rate during this period, other categories with lower growth rates will contribute significant job openings because of their size. These include Sales and Service, Business/Finance/Administrative, Trades/Transport/ Equipment Operators, and Management jobs. Furthermore, because of their size and in some cases older workforces, these industries will involve significant job openings because of workforce attrition. For example, the Trades/Transport category is expected to have almost 60,000 openings from attrition during 2007-2017.

In the previous figures on industrial and occupational employment growth, the recent and forecasted trends show the fastest and largest growth areas tend to be in skilled and highly skilled categories and those requiring some degree of formal education or training beyond high school. Almost three-quarters of future jobs in BC will require formal post-secondary education, ranging from college certificate and diploma programs, to apprenticeships and technical training, to degree and graduate programs, and formal employer-based training. Over thirty per cent of new jobs to 2017 will require a university degree and 49.5 per cent will require “some” post-secondary education (diploma, certificate, apprenticeship, formal on-the-job training, etc.). Four of five new job openings over the next decade will require some degree of post-school (K-12) formal training.

One of the occupational areas that have received little attention over the last decade is technical and technological occupations. This “forgotten middle” strata of the BC labour market includes smaller, fast-growth occupations in the Health and Natural & Applied Sciences occupational categories and the Health & Social Services and Professional, Scientific & Technical Services industry categories. There has been little research in BC on this area while most of the attention of policy makers, educators and parents has more recently focused on trades careers and more traditionally on university careers.

Another important employment trend in BC is the growth of micro-businesses and self-employed workers. During 2001-2006 the number of self-employed in BC grew by 18 per cent, almost double the rate of employment growth of 9.2 per cent among employees.

## **Labour Supply**

According to the Business Council of BC, under a “realistic scenario”, BC’s labour force growth rate is likely to slip below one per cent per year by the end of this decade, and to fall further by 2015 (Business Council, 2006). The Council indicates if there is no significant change in retirement patterns and participation rates, BC would need to more than double current immigration levels just to keep the labour force growing by one per cent per year. To keep the labour force increasing at current rates out to 2025, by 2015/16 BC would have to attract an additional 50,000 migrants (i.e. from other provinces and countries) per year.

Based on the Council’s analysis, BC’s growth in the labour force could slow to as low as 0.4 or 0.2 per cent by 2015-2020 period, if less migration and more limited increases in the participation rates occur. However, labour growth could include higher immigration and/or interprovincial migration and older workers staying in the workforce longer. The key conclusion of the Business Council’s analysis is that the demographic trends will create labour scarcity in the long term.

## **Skill Gaps**

Two areas of labour demand/supply gaps have emerged during this last period of economic growth in BC: increased skill and labour shortages; and the under-utilization and/or under-employment of certain segments of our labour force – or “skills wastage”.

### Skill and Labour shortages

Since shortly after 9/11, there have been skill and labour shortages in BC, the rest of Canada, and most of the world. According to the Conference Board of Canada, there will be a shortage of an estimated 160,000 workers to fill these jobs by 2015; and the labour shortage is forecast to intensify beyond 2015, largely due to the aging of our population (Conference Board of Canada, June, 2008). The Canadian Federation of Independent Business (CFIB) found extensive and very real impacts of skill shortages (CFIB, 2006), including having to hire under-qualified workers (65%), improve salary/benefits (45%), pass responsibilities to other employees (41%), function with fewer employees (40%), hire temporary help (35%), and use overtime/longer shifts (35%).

While this was based on a survey two years ago, all indications are that skill shortages have continued and were increasingly challenging for small businesses in BC until recently. Another indicator of this is the extent and duration of vacancies. CFIB found last year that 4.4 per cent of companies surveyed, had a least one vacancy of four months or longer in duration; and that this was an increase from 2.6 per cent in 2004 (CFIB, 2008).

Putting this in a global context further accentuates the challenges. Most of the high demand occupations in Canada are also in high demand across the developed world. According to Manpower Inc. in 2008, Canadian and global labour markets are both experiencing shortages of skilled trades, sales representatives, engineers and technicians, management, labourers, drivers, accounting and finance positions, administrative assistants, and nurses (2008).

### “Skills Wastage”

The changing face of labour in Canada means that over half of the workforce or approximately 10 million people in the country are from one or more of the following group under-presented across or in parts of the labour market: Aboriginal people, immigrants and visible minorities, older workers, persons with a disability, and women (under-represented in certain sectors or occupations). All totaled, this represents 60 per cent of our nation’s labour force. In downturns such as the current one, labour force participants in these groups tend to experience greater unemployment and other negative labour force experiences than the rest of the workforce.

The labour force participation rate for BC was 66.3 per cent in 2007. The rate for specific segments of the BC workforce was as follows (Ministry of Economic Development, 2008): Youth (15-24) – 67.8%; Aboriginal people – 65%; Women – 61%; Immigrants – 58.6%; Persons with disabilities – 39%; and Older workers (55+) – 33.2%.

Talent under-utilization is reflected many ways in the BC labour force. Some Aboriginal people have lower graduation rates and higher unemployment rates. Immigrants have issues related to language skills, a lack of Canadian experience, and a lack of foreign credentials recognition which often lead to under-employment. Persons with disabilities face systemic and attitudinal barriers, and lack workplace supports which limit labour force participation. Youth-at-risk often do not possess the basic life skills and work experience required to secure and maintain employment. Older workers require skills upgrading and flexible work arrangements to extend their participation in the labour market. Some people on welfare are not job-ready, and tend to have low levels of education, limited work experience and essential skills. While women’s labour force and employment rates have been increasing, they still experience inequities in pay, and women that are single parents, women with young children, and women re-entering the workforce can have more difficulty in sustaining full employment.

While these under-utilized labour force participants represent huge potential for employers to tap to fill vacancies and retain through career development, there is a strong risk during economic downturns that immigrants, Aboriginal people and other members of groups under-represented in the BC labour force will suffer more than others in the workforce. Policy-makers and industry leaders should continue to encourage employers to recruit from these groups in both the short and longer terms.

Another form of under-utilization of talent is the lack of recognition of credentials, experience and training that thousands of Canadians possess. According to a Conference Board of Canada study, an estimated 500,000 Canadians were under-employed, could earn an additional \$5 billion per year and could contribute to the economy if their education and skills were formally recognized – a large proportion of these people are immigrants. Jeffrey Reitz of the University of Toronto estimates that the under-utilization of immigrant skills represents an earnings deficit of \$15 billion in 1996 dollars (Conference Board of Canada, 2001).

### Other Labour Market Gaps

Due to the dynamic nature of the labour market, other skill gaps will continue to emerge between workplace needs and workforce supply in BC and elsewhere. While on an aggregate level, there may appear to be matches between needed and available skills, portability through labour mobility, transferable skills and formal recognition of competence will play an increasingly important role in the BC workforce's competitiveness. Short term or chronic labour gaps can be created or perpetuated by barriers to labour mobility, geographical mismatches, mismatches in timing between availability of workers and when they are needed, weaknesses in foreign credential recognition and prior learning and recognition processes, and lack of clear career pathways promoting inter-occupational mobility.

### **2.4 The Public Policy Context for Workforce Development**

This section briefly highlights recent labour market policy developments that may reasonably be expected to continue or become even stronger in BC in the longer term.

An overriding factor in public policies in Canada will be governments' reactions to the current global financial crisis and economic downturn. The impact of these developments is dramatic actions by governments around the world regarding monetary, fiscal, regulatory and economic policies which may affect certain industry sectors and workplaces in positive or negative ways.

An important part of the context for workforce issues and workforce development is recent and future government policy directions which directly or indirectly affect the labour market and development of the BC workforce. The BC workforce development landscape has experienced significant growth in labour market, training and education, and human resource initiatives over the last several years. Whereas the focus in the late 1970s and early 1980s was on vocational and technical training, and the focus in the late 1980s and 1990s was on post-secondary education, employment development and apprenticeship. More recently, the decade of 2000 has expanded in virtually all areas of workforce development, in response to economic growth and labour shortages.

Additionally, there have been general public policy trends across both federal and BC provincial jurisdictions in recent years that influence the nature of workforce developments and policy. Private-public partnerships, streamlined regulatory processes, increased transparency and accountability, increased labour market and human resource planning activities, and increased activities to ensure public safety and consumer protection are examples of such themes which have implications for workforce development.

A common theme throughout the recent history of workforce development policy in BC and Canada has been the evolving relationships between federal and provincial governments within the Canadian Constitution and the priorities and policies of each level of government. Education and post-secondary education are the responsibility of the provinces, while traditionally the Government of Canada has played a significant role in labour market programs and funding.

More recently, federal active labour market programming has been devolved to provinces, while provinces have also had more influence on federal immigration policies and priorities. With the urging and cooperation of the BC Government, the federal government has made improvements in immigration with regard to the Provincial Nominee Program, the Temporary Foreign Worker Program, and international student visas. The improvements relate to increased flexibility and streamlined federal policies and processes, and broadened applicability of such programs to increase access to employers and immigrants, temporary workers and international students.

The BC Government has been increasingly active in the introduction or expansion of labour market programming in recent years. This is in response to increasing skill and labour shortages and economic growth of the last several years, and has culminated with the introduction of WorkBC over a year ago and new federal-provincial labour market-related agreements (see below). WorkBC is an umbrella for over 60 new and expanded programs and involves five strategic action areas.

Several intergovernmental structures play a key role in pan-Canadian workforce-related policy development:

- *Council of the Federation* – First Ministers have in the past made some significant policy pronouncements on Aboriginal policy and labour mobility.
- *Labour Market and Education Ministers* – The Forum of Labour Market Ministers have collaborated on some key areas such as Labour Market Information, Essential Skills and joint labour market research. The Council of Education Ministers, Canada undertakes substantial comparative research, promotional activities, international cooperation, and benchmarking of post-secondary education outcomes.
- *Ministers Responsible for Internal Trade (Labour Mobility)* – A significant development in labour mobility has been the BC-Alberta Trade, Investment and Labour Mobility Agreement (TILMA) which covers the second largest economic region of Canada, with distinct clauses and implications for labour mobility and skills standards and recognition.
- *Federal-Provincial Relations and Agreements* – Canada and BC have been very active in this domain in recent years. Developments such as full federal devolution of the Labour Market Development Agreement, the introduction of the Labour Market Agreement, a new two-year Strategic Training and Transitions Fund, and a renewed Immigration Agreement all have significant implications for workforce development in BC. Generally, these bring more resources for the BC workforce and a greater diversity of program options and labour market beneficiaries. Another area of federal-provincial cooperation is the Asia-Pacific Gateway Initiative, including the recently created Asia-Pacific Gateway Skills Table.

Some of these policy developments will be covered more in the next section on the current state of workforce development in BC.

## **2.5 Current and Future Workforce Challenges**

What are the implications of this situational context for workforce development in BC? What are and will be the challenges for workforce development in BC?

The reality of BC's economic forces and the "perfect storm" are increasing economic and labour market volatility and uncertainty, thus creating a need for harmony across Canadian jurisdictions and coordination across government departments and among stakeholders. Global forces are creating greater integration of economies across jurisdictions and increased competition for labour. These factors also create the need for policies and programs that are anticipatory and that facilitate adjustment, transition, re-employment and transformation.

In summary, some of the recent and current key workforce trends in BC include the following:

- Skill and labour shortages across many sectors, occupations and regions;
- Challenges among employers in attracting and recruiting workers;
- Increasing labour turnover/retention challenges;
- The increased aging of the workforce and resulting increased retirements, as well as a declining youth cohort, and the challenges of attracting and retaining both;
- The emergence of Generation X and Y along with their unique expectations for the workplace and for careers;
- The continuing challenge among small businesses to build capacity to provide employee training and human resource development;
- Increased employer training and HR activities;
- The continuing importance of non-cash benefits;
- Increased interest of employers in employee engagement and being employers of choice;
- The increasing importance of immigrants, temporary foreign workers and international students as sources of labour and as a bigger proportion of net labour supply;
- Growth of Aboriginal youth population, and continuing barriers to employment and education and training among Aboriginal people; and,
- The continuing challenges to women in entering non-traditional occupations and maintaining parity with men in compensation.

### **Assumptions to 2020**

Before this paper moves into the current state of workforce development in BC, it is important to ask, what we can reasonably assume about the BC economy and labour market during the decade to 2020; what trends or developments can we expect over this long term? Some of the obvious continuing or emerging trends affecting workforce development in BC will be as follows:

- Increasing globalization and integration of economies, and the resulting continuing flow of professionals and skilled workers between countries;
- Increased aging of the population and workforce;

- With growing pressure of increasing health care costs on government expenditures, workforce development resources will need to be used more efficiently;
- Labour market flexibility and the adaptability of workforces will become increasingly important because of global and economic volatility and technological change;
- We can reasonably expect another downturn or recession in Canada in the next decade, since we have experienced at least one in each of the previous four decades;
- Continuing pressures to improve productivity and competitiveness of companies and jurisdictions (and workforces);
- Immigration will increase in its importance as the source of new labour supply, but we will need to continue to tap both domestic and external sources of labour;
- International/interprovincial/intraprovincial mobility and the assessment and recognition of skills and learning will continue to be important competitive factors for economic growth;
- Attaining a high performance workplace and employer of choice status will become increasingly important for all organizations;
- Use of technology in the workplace will continue to increase and impact the nature of work and occupations;
- Environmental concerns and activities will become increasingly pervasive in our economy;
- Formal education and training will be increasingly important for preparing for workforce entry and maintain workforce competence; and,
- Labour force diversity will continue to increase due to sources of population and workforce growth.

### **3. CURRENT STATE OF WORKFORCE DEVELOPMENT IN BC**

#### **3.1 Workforce Development**

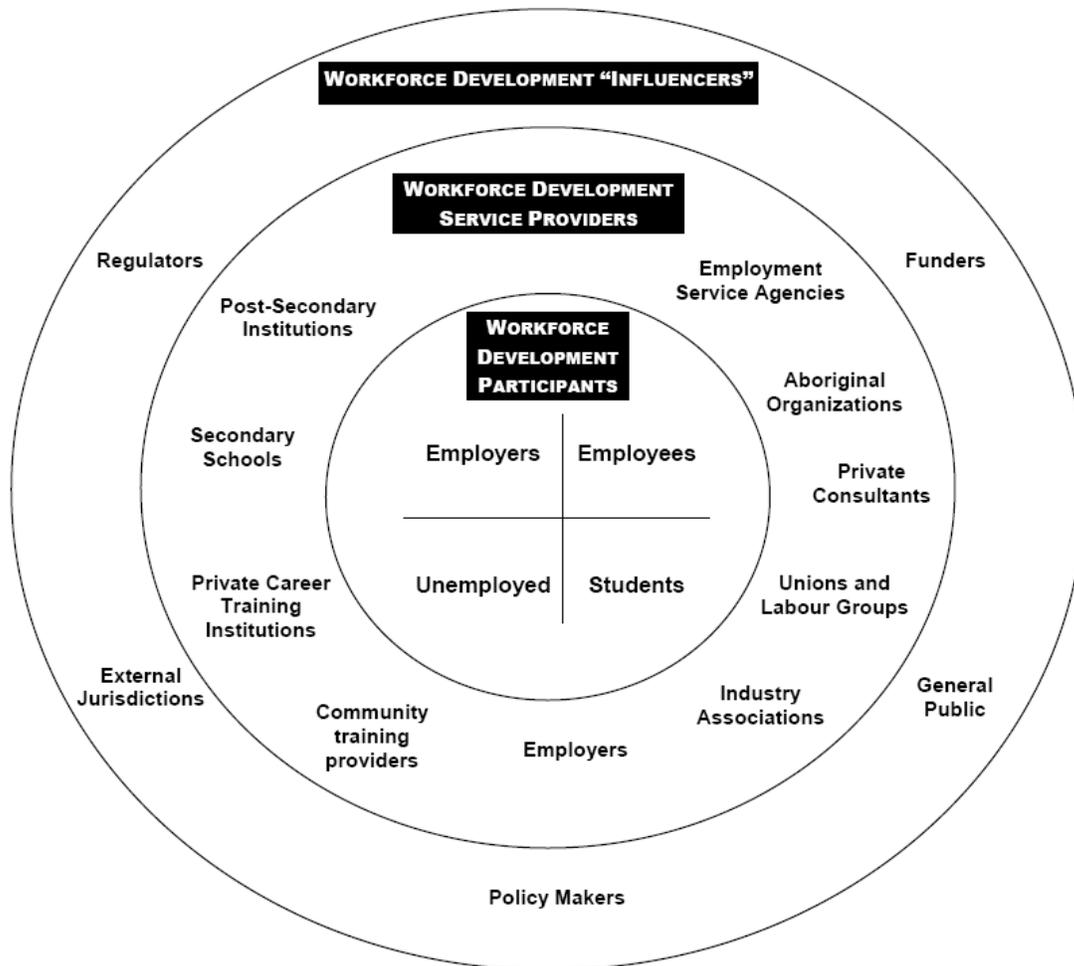
This section of the paper reviews the current state of workforce development in BC. As indicated in Figure 1, this includes formal education and training (excluding university training and general K-12 education), labour market development, and employer-based (mostly private sector) human resource development. While not an exhaustive and detailed “evaluation” of all things workforce development, this section captures the essence of key developments and performance of policies, programs, services and practices in these areas. Figure 2 shows the various participants in BC’s workforce development.

This section refers to the BC workforce development “system”; however, in reality there is no such system. The BC workforce development landscape consists of a number of systems, including education, post-secondary education, apprenticeship and industry training, human resource management, employment development systems, etc. Using the term “system” reinforces the need for better linkages, connections, coordination, etc. among the specific systems in BC.

At the centre of workforce development are the key participants in and beneficiaries of workforce development: employees, employers, unemployed persons, and students. Each of these groups can be broken down into sub-categories. Next in the “circle” of workforce development are the entities that provide programs and services to the participants. There is a diverse plethora of education and training institutions, private career colleges, employment service providers, industry groups, labour groups, Aboriginal and community organizations and others in the business of providing workforce development-related programs and services in BC. These groups such as industry associations and labour groups play other important roles and not just provision of workforce development services.

**Figure 2**

**BC Workforce Development System – Roles and Roleplayers**



In the outer “ring” of the workforce development circle are the “influencers” that do not directly provide services but influence workforce development in various important ways such as through funding, regulation, setting standards, public opinion, international standards and other impacts.

### **3.2 How Are We Doing Overall?**

As the availability of benchmark data and performance indicators are not uniformly available, various sources and comparisons will be used in this section. While imperfect, it yields an overall sense of how well Canada and BC is performing in terms of labour market, workforce and workforce development criteria.

In terms of broad indicators, in addition to its overall ranking of 10<sup>th</sup> (out of 134 countries) in global competitiveness (World Economic Forum's Global Competitiveness Report 2008-2009, 2008), Canada ranked 9<sup>th</sup> in higher education and training and 7<sup>th</sup> in labour market efficiency. However, there were some weaknesses identified within these indicators. While 8<sup>th</sup> in quality of education and 6<sup>th</sup> in secondary enrollment, Canada placed 13<sup>th</sup> in quality of math and science education and 19<sup>th</sup> in the extent of staff training. Some other higher education and training indicators in which Canada is rated relatively low are: Tertiary enrollment – 24<sup>th</sup>; Quality of math and science – 13<sup>th</sup>; and, Internet access in schools – 13<sup>th</sup>.

In terms of labour market efficiency, the Forum looks at such factors as cooperation in labour-employer relations, flexibility of wage determination, non-wage labour costs, rigidity of employment, hiring and firing practices, extent and effect of taxation, total tax rate, and firing costs. While Canada was ranked 6<sup>th</sup> in rigidity of employment and 11<sup>th</sup> in reliance on professional management, it was 34<sup>th</sup> in cooperation in labour-employer relations, 31<sup>st</sup> in pay and productivity, and 22<sup>nd</sup> in female participation in the workforce. Canada was also ranked low on non-wage labour costs (46<sup>th</sup>), hiring and firing practices (30<sup>th</sup>), and pay and productivity (31<sup>st</sup>).

Global competitiveness also includes innovation, and the Forum ranked Canada 16<sup>th</sup> in this area. It was ranked 18<sup>th</sup> in capacity for innovation, 4<sup>th</sup> in quality of scientific research institutions, 22<sup>nd</sup> in company spending on R&D, 14<sup>th</sup> in university-industry research collaboration, and 17<sup>th</sup> in the availability of scientists and engineers.

In the Conference Board of Canada's recent *Report Card on Canada*, it gave Canada a "B" on its economic, education and skills, health and social performance, but a "C" on environmental performance, and a "D" on innovation (Conference Board of Canada, 2008). The Board's reason for concern on the economic front:

"Three factors are causing Canada to lose ground. First, Canada is a chronic laggard on several important economic indicators – most notably, productivity. Second, Canada has failed to keep pace in the growing competition for global investment. Third, even in some areas where Canada has improved, other countries are doing better" (p. 4).

In education and skills, the Conference Board gave Canada an "A" for high-school graduation rate and college completion, a "B" for adult literacy, and a "D" for science, math, computer science, and engineering graduates.

### **3.3 Assessing the Three Areas of Workforce Development in BC**

Getting more specific and BC-focused, this section reviews evidence of performance in the three areas of workforce development covered by the scope of this paper: formal education and training; labour market development; and employer-based human resource development.

#### **Formal Education and Training**

This category of workforce development, for purposes of this paper, includes the following types of policies and programs: secondary school vocational and career programs; post-secondary vocational and technical programs; secondary vocational and technical programs; private career training programs; employer-based training; industry-based training including apprenticeship; union/labour-based training; joint management/labour training; and, community-based training.

#### K-12 Vocational and Technical Education

While the focus in this paper is partly on non-university post-secondary education, it is important to briefly refer to the last few years of high school in preparing students for the world of work and to provide them with opportunities to explore and start to pursue careers and vocational choices.

While BC high school graduation rates are increasing, including among Aboriginal students, the province ranked 8<sup>th</sup> in Canada in terms of school graduation rates per 1000 population in 2005 and 2006 (BC Progress Board, 2007). Also, in the 2006 OECD *Programme for International Student Assessment* (PISA) involving 57 countries, Canadian students ranked an impressive third, fourth and seventh in Science, Reading and Math scores, respectively (OECD, 2007).

The Ministry of Education's Service Plan includes the objective, "BC students will have the opportunity to focus on career development" (Ministry of Education, 2008). The Ministry contributes funding to the Industry Training Authority to two key programs, the Accelerated Credit Enrolment in Industry Training (ACE-IT) program, and the Secondary School Apprenticeship (SSA) program. The former is school-based technical training delivered in partnership with post-secondary institutes and gives students credits toward post-secondary programs and towards an apprenticeship. The latter program provides the work-based experience component of apprenticeship programs. Participation in ACE-IT has almost doubled from 2,309 to 4,010 students in two years from 2005/06 to 2007/08, and enrolments in SSA increased almost 30 percent over the same period from 1,431 to 1,860 students.

In addition to these hard indicators, there are various anecdotal indicators that career-related programs and activities have increased in the school system significantly over the last decade. Part of this is a sense – without empirical data – that there is a greater awareness of and interest in trades and technical careers among students, educators, parents and the media (e.g. Mustel Group Market Research, March 2007). Also, there is a higher prevalence of career and job fairs, career education, work experience, cooperative education, industry-education partnership programs in schools throughout the province.

Despite perceived improvements, there still are communication gaps between employers and industries on one hand and schools on the other. Many businesses do not know how to reach out to schools, yet many employers and industry associations have been increasingly eager to make presentations and promote their careers to local schools. A recent business report referenced the following perceptions among small businesses:

- Small businesses feel disconnected from BC's educational system and that there is a lack of understanding of small business among educators; and there is a lack of awareness and understanding of various education, training and employment-related programs and services among small businesses.
- The BC school system needs to do a better job of preparing youth for the world of work and equipping them with basic work skills. Secondary school programs need to be more applied and have more direct links with the business community, particularly local small businesses. (Coalition of BC Businesses, 2007, p. 25).

Some technology groups such as the Applied Science Technologists and Technicians of BC maintain that math and science education in high school needs to be strengthened, including ensuring an adequate supply of such teachers and promotion of such courses. Further, many business groups have called for greater efficiencies in post-secondary education through expanded use of online learning, increased use of facility capacity on weekends and evenings, and shorter programs (e.g. three-year degrees), etc.

In "Connecting Supply and Demand in Canada's Youth Labour Market," Brisbois et al. conducted research on connecting schools and employers and identified the important role that school-employer partnerships play in "helping young people make informed choices of learning pathways and in facilitating the school-to-work transition" (Canadian Policy Research Networks, 2008, p. 41). They suggested strengthening such partnerships through the following strategies:

- Providing the resources needed to sustain school-work programs, and ensure that both the training facilities and the skills of the teachers are up-to-date;
- Establishing committees/advisory boards for such programs that involve all partners;
- Involving employers in program design and delivery;
- Giving instructors opportunities to update their own skills; and,
- Calling employers' attention to evidence that investment in such programs is not only good for the students and the community, but also good for their business.

An on-going challenge for our school system and our labour market will be K-12 enrolment declines. According to the Ministry of Education, "Enrolment in the K-12 education system is estimated to have declined between 1997/98 and 2008/09 by approximately 60,000 students (public only). Over the next six years, from 2009/10 to 2014/15 enrolment is expected to continue

to decline” (Ministry of Education, February 2009, p. 7). That means the volume of secondary school graduates will continue to decrease over the next decade.

### Post-Secondary Vocational and Technical Education

In a recent forward-looking report on *Changing the Fortunes of America's Workforce: A Human Capital Challenge*, the McKinsey Global Institute emphasizes, “Education is the most important mediator of future labour and supply and demand (June 2009, p. 12).

There have been several major developments in post-secondary education and training in BC over the last decade that relate to workforce development. These include the recent government re-organization which combines labour market development, post-secondary education and immigration programs within one Ministry.

One challenge in benchmarking workforce development through non-university post-secondary education is the lack of comparative data on vocational and technical (certificate and diploma programs) education and training. Or there may be indicators for all of Canada but which are not disaggregated for BC; and other indicators may be for all public post-secondary education in BC without distinguishing between university and non-university education.

Despite these shortcomings, according to various indicators from the last several years, there have been many positive post-secondary inputs and outputs, including substantial investments in post-secondary education. \$15.9 billion was invested in post-secondary education in B.C. since 2001 – more than the entire combined budgets of Saskatchewan and New Brunswick; and a 40 percent increase in annual operating funding for post-secondary institutions since 2001. A \$1.5 billion capital expansion occurred at public post-secondary institutions since 2001 – the largest post-secondary expansion in history (Ministry of Advanced Education, 2008).

Almost 200,000 student spaces are being funded by the BC Government this academic year; and 32,000 new full-time spaces for students were added to BC’s public post-secondary institutions and ITA since 2001, including 2,500 new graduate student spaces at BC’s research universities. About 2,000 online courses can now be accessed by students through BCcampus, and 15,538 registrations took place last year through BCcampus, which is increasing online learning options at BC’s public post-secondary institutions. Also, the BC Education Guarantee was extended to provide free Adult Basic Education and high school upgrading for adults in BC (Ministry of Advanced Education, 2008).

Also, we have seen more students accessing post-secondary education in BC. 430,000 students were enrolled in public post-secondary institutions in BC, the highest number ever; and 23,000 international students were enrolled in BC institutions, again, the highest number ever. This year there were 18,000 public post-secondary students who identified themselves as Aboriginal, an

increase of 23 per cent since 2002-03. Ninety-five per cent of graduates from BC's public post-secondary institutions were employed when surveyed between nine months and two years after graduation. This is less than half the unemployment rate for British Columbians in the same age range with high school diplomas or less (Ministry of Advanced Education, 2008).

In April 2007, Geoff Plant, QC, special adviser to the Premier and to the Advanced Education Minister for *Campus 2020: Thinking Ahead*, submitted his final report to the provincial government on the future of BC's post-secondary education system (Plant, 2007). The report makes 52 recommendations to government on how to build on the strengths of BC's existing system of higher education. Plant's focus was on broad principles, goals and strategies and not a detailed blueprint with recommendations on specific program areas, therefore it only broadly relates to workforce development. Many of his recommendations relate to creating or modifying existing structures and mechanisms for review, planning, quality assurance, and collaboration.

Other relevant indicators for BC's non-university post-secondary education include the following:

- According to the Campus 2020 report, for the last year data was available on college certificate and diploma program completion, in 1998, BC's graduation rate was one-half the national average and lower than competitor provinces such as Alberta.
- According to the BC Progress Board, the percentage of British Columbians with a trade certificate or diploma from a vocational school or apprenticeship training was 11.0 percent versus the national level of 10.7 percent; and several provinces had higher levels than BC (BC Progress Board, 2007).
- According to Statistics Canada data for 2005, BC's adult literacy average scores are significantly higher than the national average (Ministry of Advanced Education, 2005). However, literacy is still a challenge for our province, with 1 million British Columbians between 16 and 65 having low levels of literacy – almost 100,000 more than in 1994. About 44 per cent of people in this age group have low numeracy levels that prevent them from getting and keeping good jobs; and literacy levels are even more difficult for groups such as immigrants, Aboriginal people and unemployed persons (Ministry of Advanced Education, 2007).
- BC led Canada in total of courses, programs and other forms of adult education/training with almost 60 per cent of the population aged 16 to 65 (Kjell Rubenson et al., 2007).
- In a recent capacity review, the Ministry of Advanced Education found that up to an additional 22,000 “apprentice technical training spaces could be achieved by applying a number of factors to optimize capacity, such as utilizing unscheduled time, double shifting in some trades, and increasing class sizes” (Resource Planning Group Inc., 2007). This was much higher than the additional capacity of 3,935 that institutions suggested could be achieved.

A few other key characteristics related to post-secondary but challenging to quantify are foreign credential recognition (FCR) and prior learning assessment and recognition (PLAR). While these are not purely the responsibility of post-secondary institutions, they need to play a key role in assessing and recognizing the credentials, skills and experience of immigrants and workers in BC in order to facilitate mobility and to maximize the utilization of talent. In surveying the development of PLAR in Canada over the past three decades, a recent national report concluded, "...despite its demonstrated quality, effectiveness and benefits, to a large extent support for and adoption of PLAR remains partial, fragmented and marginal, and subject to uncertain funding, intermittent policy attention and weak institutional leadership" (The PLA Centre, 2008, p. 39).

BC has a positive track record for post-secondary transfer through the leadership of the British Columbia Council on Admissions and Transfer which facilitates admission, articulation, and transfer arrangements among BC post-secondary institutions. However, more needs to be done in terms of transfer and articulation among public post-secondary institutions, private career colleges, and Aboriginal post-secondary institutions.

In summary, non-university public post-secondary education could be enhanced in a number of areas related to the BC labour market and workforce development:

- Better linkages between publicly funded student spaces and labour market needs (provincial and local), including more joint planning between industry groups and institutions. In a recent Canadian Council on Learning report, it recommended research on matching needs and skills: "Little is known about why students choose a particular PSE program, decisions that have a direct impact on the skill sets available in the workforce (CCL, 2009).
- More strategic allocation of government's 25,000 new student spaces so they more directly meet the economic, social and regional needs of the province.
- Increase access to and success in post-secondary education, particularly by Aboriginal people, mature workers, and at-risk youth.
- More clear differentiation of roles and mandates among various types of post-secondary institutions.
- Better standardization of vocational and technical curriculum.
- Facilitation of more bridging and laddering across institutions and programs to facilitate student and worker completion of programs and mobility.
- Quick-response training programs to facilitate workforce transition and re-employment.
- A partnership initiative of the government, institutions, learners and employers to make a concerted effort to significantly increase capacity for training through institutional adjustments and distributed learning.
- As the *Campus 2020* report suggests, mechanisms to enable institutions to jointly plan and collaborate on programs and strategies.

Also, a key question for both K-12 education and post-secondary education is how school districts and institutions will adapt to smaller population cohorts in the traditional high school and post-secondary age groups (i.e. especially 15 to 30 year olds). Will they attract more international students and baby boomers (mature workers and retirees)?

One direct result of the Plant recommendations was the designation by the BC Government of five existing colleges, university-colleges and institutes as new universities have been created. Six special purpose teaching universities have been created since 2001, and 238 new degree programs have been approved by the Minister of Advanced Education during the same period (Ministry of Advanced Education and Labour Market Development, 2008). While this expands needed opportunities for students interested in university training, does this signal an imbalance of priorities between university and non-university programs in BC? Much of the employment growth over the last decade was and is expected to continue to be in high-skilled trades, technical and technological and para-professional occupations which are dependent on ample funding and spaces for apprenticeship, other work-based, vocational and technology training.

With finite resources and human capital, today more than ever and in the future it will be important for parts of our workforce development system to not work in isolation as “silos.” There is much synergy to be realized by connecting K-12, post-secondary, ITA, and other education and training entities. As recent report by Usher and Dunn (2009) makes the following conclusion:

“In the end, it comes down to this: the sector is going to be asked to do more with less. That means that institutions will have to pay attention to productivity. This is not a concept that sits easily in most educational settings, but it is inescapable nonetheless. If institutions do not think about how to be more productive, then the current downturn in the economy and the accompanying financial squeeze on PSE will, almost by definition, reduce the quality of the education students receive. Only those institutions and governments that re-think the delivery of education itself, by measuring inputs and outputs and deciding based on evidence where dollars can best be spent, can hope to come out of this recession in better shape than they came in” (p. 31).

#### Apprenticeship and Industry Training

In 2004, the BC Government introduced a new industry training model, led by a new crown corporation, the Industry Training Authority (ITA). The ITA has legislated responsibility to govern and develop the industry training system in BC. ITA replaced the Industry Training and Apprenticeship Commission (ITAC) which was disbanded by government in 2002. The ITA works with industry and employers, trainees and apprentices, and training providers to meet industry's training needs, now and in the future.

A key part the ITA's mandate has been to develop a truly industry-led approach to industry training in BC with a strong focus on training quality and employer and learner satisfaction levels. It has pursued this through the creation of seven industry training organizations (ITOs). ITOs are a mechanism by which the ITA delegates industry responsibility for industry training in a specific

sector. They are not-for-profit legal entities with responsibility for designated industry training programs. ITOs are established by industry, and are accountable to and co-funded by the ITA.

According to its latest annual report, the ITA has significantly increased industry training outcomes in the province over the last five years. For example (ITA, 2009):

- Registered participants in industry training programs increased from 14,676 in 2003/04 to 40,281 in 2008/09, a 174 per cent increase;
- Youth apprenticeships increased from 861 to 4,938 over the same period, a 474 per cent increase;
- Registered sponsors – just about all are employers – increased from 6,740 to 10,844 over this 5-year period, a 61 per cent increase; and,
- Apprentice credentials awarded increased from 2,329 to 6,038 over this period, a 159 per cent increase.

Only a few of its bold targets have not been met. One example is apprenticeship completion rates, which remained at 42 per cent over the last two years. However, ITA established for the first time in BC a benchmark and procedures for tracking this important statistic; making BC one of the few jurisdictions in Canada doing so.

In comparison with the rest of Canada, in terms of apprentice registrations, BC's increased by 19,950 between 1997 and 2008 or 98.5 per cent compared to 91.7 per cent nationally; however, BC's number of completions declined by 28.9 per cent (-875) compared to the national completions increasing by 27.4 per cent (4,485) (Ménard Marinka, Cindy Chan and Merv Walker, 2008a and 2008b).

In terms of apprentice completers, continuers or discontinuers, 75 to 83 percent of BC apprentice participants felt that their technical training provided “up-to-date equipment or technology” in 2007 (Marinka et al, 2008b). This was approximately the same level as apprentices across Canada (Marinka et al, 2008a).

Another indication of participation in BC's apprenticeship system is graduate follow-up surveys. In the *2007 Apprenticeship Survey* of all former apprenticeship students who completed their technical training in a BC public or private post-secondary institution between July 2006 and June 2007. Eighty per cent of respondents said they received their trades qualification or inter-provincial certification (Ministry of Advanced Education and Outcomes Working Group, 2007). Eighty-four per cent rated the quality of instruction very good/good; and 90 per cent of former apprentices were very satisfied/satisfied with their workplace training; and 96 percent were employed at the time of the survey, a 2.7 per cent unemployment rate.

Last year, the Auditor General of BC released *A Major Renovation: Trades Training in BC*, a report of its audit on “how well the government and the ITA were leading and managing the trades training system.” (Auditor General of BC, 2008). While recognizing the challenges of introducing a new trades training model and its accomplishments and recent improvements to date, the report concludes that “the ITA has not provided sufficient guidance and direction to its partners and stakeholders to put this model into practice” (Auditor General of BC, 2008, p. 6). The Auditor General’s report calls for:

- A clear definition of the roles and responsibilities of the ITOs;
- A comprehensive, clear and transparent quality assurance program for program development;
- Adequate information to inform in-school training funding allocations; and,
- Adequate disclosure of the basis on which reported performance measures are made.

In its Management Response to the report, the ITA responded to each Auditor General finding, acknowledging the findings and showing how the ITA has already been working on improving the identified needs. In its response to the report, the Ministry of Advanced Education and Labour Market Development acknowledged “the success of the ITA and its partners, the Industry Training Organizations and training providers, who together continue to build on the significant achievements realized over the past four years.” (p. 17).

Based on an objective review of its accomplishments and outcomes to date and reflecting two key factors not emphasized in the Auditor General’s report, ITA is a success to date and going in the right direction. A key factor to keep in mind is the introduction of a new training model and the creation of ITA and its mandate is a major change management process and cultural shift that takes time to complete. A second factor is that progress is always relative, and when one compares the state of programs, curriculum, relations, awareness, etc. that existed before ITA was established, very much progress has been made in these and other areas.

One of the qualitative areas of progress for ITA and its partners has been a raised awareness of the importance and attractiveness of trades training and careers. This has resulted in significant increases in K-12 students, teachers, counselors, administrators and parents being involved in vocational education and career programs.

In addition to building on its successes to date and expanding in activity areas that are working, other issues that the ITA needs to resolve or work on could include:

- To what extent, if at all, should ITA move into growth industries and occupations that are beyond the traditional trades? There may be significant needs and markets for these but would the ITA have the resources and mandate to pursue this?

- Continue to engage employers to directly participate in industry training by sponsoring apprentices and providing on-the-job training, particularly smaller businesses.
- Resolving with ITOs what is “full-service” delivery, clarifying ITA/ITO roles in this, and ensuring this is not simply a transfer of funds to ITOs without added value from industries.
- Really expand flexible training models to make industry training much more accessible to employers and employees, particularly those in rural regions and small businesses.
- Show tangible and significant success in supporting and increasing participation and completion in industry training by Aboriginal people, immigrants, people with disabilities, and women (in non-traditional trades).
- Continue to improve the adoption of provincial or national standards and quality assurance among public and private training providers throughout the province.

The ITA should also anticipate and reflect in its strategies the impacts and implications of the current economic downturn and increased employment volatility over the coming years.

Another important aspect of the BC industry training landscape in recent years – mostly in concert with ITA development – has been several industry sector training and skills initiatives. These range from residential and non-residential construction and tourism and hospitality industry groups to transportation-related sectors such as aerospace, automotive, marine, road building and trucking, and to resource sectors such as mining, oil and gas, pulp and paper and solid wood, and shipbuilding and repair. While many industry associations, and other industry groups have upgraded existing or created new occupational standards and training programs, the challenge remains to engage and stimulate increased participation in training among individual employers.

Regulatory safety, health and environmental related training and certification have also been incorporated into industry technical training through increased activities of WorkSafeBC, the BC Safety Authority, other regulatory bodies, and through industry associations becoming more active in helping employers effectively manage employee health and safety.

#### Private Career Training

As of April 1 of this year, there are 456 career training institutions registered<sup>4</sup> with the Private Career Training Institutions Agency (PCTIA), of which 193 were accredited (PCTIA, 2008). In 2007, 62,000 registrants had paid over \$260 million in tuition to enroll in one of 5,200 programs at these institutions. Almost of the programs are “workforce development” related – only a few are degree programs or general interest courses. In addition, an estimated 100,000 students attend 150 to 200 private English-as-a-Second Language (ESL) institutions.

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<sup>4</sup> See [www.pctia.bc.ca](http://www.pctia.bc.ca) for definitions.

Private career institutions operate in a very competitive sector, serving niche markets and providing many students with the opportunity to develop the skills, knowledge and experience necessary to enter and succeed in BC's labour market.

In response to recommendations in *Campus 2020 – Thinking Ahead*, the BC Government appointed John Watson to review the PCTIA legislation to determine if the current regulatory framework was sufficient to ensure quality and protect students, among other questions. The Watson Report included several recommendations which led the BC Government to implement a number of changes to strengthen the quality, accountability, opportunities and protection for students in this area of post-secondary education (Watson, 2007). He emphasized in his introduction the significance of this sector for BC:

“BC has a large stake in ensuring the success of the institutions. The province is facing a skills shortage and private career institutions are key players in helping to address that shortage....Educating and training students in the private sector removes a huge burden from the taxpayers of BC and directly contributes in a substantial way to the economy of the province through payrolls and expenditures on goods and services” (Watson, 2007, p. 4).

Watson made recommendations to government on changing the current legislative and regulatory framework governing private career institutions, including the following (Watson, 2007):

- Enhance student protection;
- Bring ESL schools under the PCTI Act;
- Require higher standards for entry into the industry;
- Increase accountability and transparency in the governance of the sector;
- Increase the resources and tools available to the Agency for enforcement and monitoring;
- Bring more flexibility to the regulatory process in order to reduce costs and administrative burdens for compliant institutions.

The private career training system is a vital part of BC's workforce development landscape, providing access for thousands of students to career related training in a broad range of occupations and skills. There is not a lot of financial and output data on this system and there is not the time in this review to research and draw conclusions about what is working and what is not. It is important that whatever planning and policy development is undertaken in workforce development in BC that the private career training sector is consulted and involved and seen and used as a strategic lever for change.

### **Labour Market Development**

There have been many major developments in labour market policies and programs in BC over the last several years:

- Strengthening the Labour Mobility Chapter in the Internal Agreement on Trade;
- Immigration, Labour Market and Labour Market Development Agreements with the federal government which provide BC with more resources and a stronger role in the province's labour market and immigrant settlement programming;
- BC Employment Program for income assistance recipients;
- Increased support for Aboriginal people, persons with disabilities and immigrants;
- Increased secondary school career and vocational programs and trades training;
- More regional labour market initiatives;
- Increased human resource planning; and,
- More employer and worker tools and supports available.

In response to an increasingly tight labour market and growing skill and labour shortages resulting from the economic growth of the last seven years and demographic trends, the BC and Federal Governments introduced several new workforce-related initiatives over the last few years.

#### TILMA

The Trade, Investment and Labour Mobility Agreement aims to eliminate most barriers to trade, investment and labour movement between Alberta and BC (Governments of Alberta and BC, 2006). It is intended to create an open economy between the two provinces with a clear dispute resolution mechanism. The governments and supporters of TILMA indicate that the agreement will create \$4.8 billion in new economic activity and 80,000 new jobs – a 3.8 per cent and 3.6 per cent increase in GDP and employment, respectively. Now fully implemented as of April 1, 2009, TILMA applies to local governments, crown corporations, academic institutions, school boards, health authorities and financial services. The existence of TILMA is already appearing to encourage apprenticeship officials, colleges, and industries in both provinces to harmonize occupational and training standards, curriculum and processes. It is too early to measure the actual efficacy of TILMA but in principle it appears to offer tools and requirements to facilitate labour mobility.

#### Interprovincial Mobility

After an extensive period of intergovernmental discussions, as part of Canada's Agreement on Internal Trade (AIT), federal, provincial and territorial internal trade ministers agreed on December 5 of this year on "full labour mobility" between provinces, breaking down economic barriers and allowing Canadians to move freely throughout the country (Ministry of Technology, Trade and Economic Development, 2008). These new labour mobility provisions in the AIT require that effective April 1, 2009, "people with a specific professional or occupational certification in one province or territory will be recognized as qualified to practice their profession in all provinces and territories where their profession or occupation is regulated."

#### Federal-Provincial Agreements

*Immigration* (some text used from Canada and BC Government official backgrounders)

The Agreement for Canada-British Columbia Cooperation recognizes the importance of immigration to British Columbia's economic and social development, and commits the two levels of government to work together on the recruitment, selection, admission and control of immigrants, refugees, international students and temporary workers who settle in BC. All streams of immigration to BC are recognized in this agreement; as well it introduced new objectives related to regional immigration, the recognition of foreign credentials and the development of official-language, minority communities. It allows for greater provincial flexibility in planning for immigration levels and responding creatively to emerging needs. The agreement also maintains and strengthens the Provincial Nominee Program (PNP)..

#### *Federal Immigration Policy and Programs*

There are several federal immigration programs in place relating to permanent immigration and selection and the PNP, the Temporary Foreign Worker Program (TFWP), and International Students, Working Holiday, and Students Working Abroad programs. The BC Government has played an increasing role in influencing federal policies and program procedures and deserves credit for advocating for more streamlined, accessible and fair processes for employers, immigrants, foreign workers and international students.

#### *Labour Market Agreement (some text used from official BC Government backgrounder)*

The LMA is aimed at increasing access to training for unemployed individuals who are underrepresented in the labour market and who currently do not qualify for Employment Insurance (EI). It will also fund training for employed individuals who are low-skilled and require essential skills, or require recognized credentials to reach their full potential in the labour market.

LMA clients include youth, immigrants, persons with disabilities, Aboriginal people, older workers, and women. LMA programming will be targeted to key labour market priorities with a focus on filling program and service delivery gaps as identified in the WorkBC action plan. It will also respond to the needs of BC employers by increasing the participation of under-represented groups in the provincial labour market. Programming will be delivered through a variety of ministries and government organizations.

Federal LMA funding represents approximately \$66 million per year over six years for a total of approximately \$396 million. The LMA implementation began April 1, 2008; the Ministry of Advanced Education and Labour Market Development is responsible for the LMA. Improvements and possible additional funding are planned for Year 2 of the LMA.

One issue is the need for transparency about the design and development of programming and expenditure of funds under the LMA. This first year of the agreement represented short timelines for ministries and agencies to design programs and commit funding. As a result, most of the funds were spoken for with limited input from outside government. Another LMA issue is BC's ability to make a case with the Federal Government for more flexibility in the LMA, including

regarding eligibility of workers (e.g. displaced higher-skilled workers) and providing direct support to small businesses for workforce development.

*The Labour Market Development Agreement* (some text used from official BC Government backgrounder)

LMDA programs are aimed at helping EI clients and the unemployed general public to prepare for and obtain employment. Activities include sector specific initiatives to assist employers in meeting their human resource needs. LMDA clients include employers, unemployed persons, EI clients, income assistance recipients and the underemployed. The transfer of the LMDA program from Canada to BC includes:

- Annual federal funding of \$20.5 million for administration costs and \$280 million for program delivery;
- The transfer of approximately 250 federal government employees in over 30 Service Canada offices to the BC Public Service in February of this year; and
- The transfer of a broad range of contracted services across all regions of the province by February 2009.

The Ministry of Housing and Social Development is the provincial ministry responsible for the LMDA. The new LMA and the transferred LMDA are two additional tools that will support WorkBC, and will provide BC with the opportunity to better target BC investments in employment programming and skills development, and training across the province.

One question will be how the BC Government will or will not change some of the federal programs it takes over. For example, an important program for sectoral workforce planning, upside and downside adjustment, and the development of needed training programs in recent years is the Labour Market Partnerships Program.

#### *The Strategic Training and Transition Fund*

Early this year, the Federal government announced a two-year, national \$500 million Strategic Training and Transition Fund (STTF), to be delivered through the LMA. British Columbia's portion is \$25 million per year for 2009/10 and 2010/11. While the STTF is delivered through the same transfer process as the LMA, its beneficiaries are expanded to include all employed persons impacted by the economic downturn and all unemployed (no distinction between EI and non-EI clients). The overall purpose of STTF is to provide labour market programs and services that support employers and communities.

#### WorkBC

WorkBC is a comprehensive action plan introduced last year by the BC Government and focusing on five strategic action areas: Keep the workforce we have in BC; Develop the skills of our existing workers; Increase the labour market success for Aboriginal people; Attract and recruit

new workers; and, Address regional skills shortages (Ministry of Economic Development, 2007). Over 60 key action areas are identified in the WorkBC action plan to support these strategic goals. A WorkBC “A Year in Review” provides a detailed listing of accomplishments in the first year of WorkBC for each of these key action areas (Ministry of Economic Development, June 2008).

During a June 2008 WorkBC forum sponsored by the BC Government, industry and other stakeholders were generally positive about WorkBC results to date (Ministry of Advanced Education and Labour Market Development, 2008). Industry stakeholders and others generally supported WorkBC initiatives including ITA programs and ITOs, expanding high school trades training and awareness, the Skills Connect program (for immigrants), the Provincial Nominee Program, immigrant settlement funding, creation of Regional Skills Councils, national and international marketing to attract workers, influencing federal immigration policies/programs, expansion of post-secondary education spaces, new labour market agreements, increasing awareness about the challenges and solutions, and the WorkBC website.

The overriding comment from Forum participants was that WorkBC needs a vision and an overall strategic approach, accompanied by metrics or indicators of success for each strategic action area. Also, they suggested that WorkBC needs to add value to and expand informational strategies including increasing awareness of the business case for taking action on various workforce issues; and clear branding and marketing with industries and employers. Many stakeholders called for a more holistic approach that recognized workforce-related strategies will not be (as) effective without adequate child care, affordable housing, transportation, and community infrastructure and engagement. Much of the discussion at the forum focused on immigrant integration, further streamlining and expanding successful programs, more improvements in the TFWP process, expanding higher level ESL training, and more flexible provisions for international students.

In response to this, in its current Service Plan, the Ministry of Advanced Education and Labour Market Development announced the *BC Workforce 2020 Strategy* (to be completed in winter of 2009/10), a “comprehensive strategy to address priorities presented by the imbalance between the supply and demand for skilled labour in the short-term as well as the labour challenges presented by the demographic shifts in the long term” (Ministry of Advanced Education and Labour Market Development, February 2009, p. 16). It is hoped that this will provide strategic framework to guide future labour market development program priorities and tie together and integrate various provincial initiatives and ministries.

One question is the status of the provincial BC Training Tax Credit Program, which was designed to provide up to \$90 million in tax incentives over three years for employers and workers who participate in and complete industry training regulated by the ITA. Little is known about the results and uptake of this program so far. However, the *BC Budget and Fiscal Plan – 2009/10 to*

2011/12, estimates tax expenditures of \$15 million for personal income tax credits and \$5 million for corporate income tax credits for 2008/09. Further, informal information from Ministry of Finance staff suggests that once all claims are in that corporate credits will reach \$15 million, for a one-year total of \$30 million, as planned. Regardless, it is important that such programs are evaluated as soon as possible and the results be published. Further, this July, the Minister of Finance announced that the training tax credit will be increased from \$2,000 to \$4,000 in terms of the maximum an employer can claim annually per eligible apprentice.

#### Small Business Roundtable

The Small Business Roundtable was established in 2005 by the BC Government to engage in a dialogue with small business, to develop recommendations on strategies to enhance small business growth and success, and to champion small business interests. Since the Roundtable report, the Ministry of Small Business and Revenue has initiated a number of the Roundtable's recommendations, including (Small Business Roundtable, 2008):

- Development of a Small Business Action Plan;
- Supporting expansion of Junior Achievement British Columbia;
- Use of a Small Business “lens” for legislative, policy and program development;
- Development of an Employer’s Tool Kit;
- Funding of Regional Skills Councils to support local capacity building;
- Building Skills for Small Business, involving development of an online HR Quiz diagnostic tool and a Resource Guide searchable database of courses and other resources.
- \$10 million funding under the LMA and to work with key small business groups to develop training projects throughout the province.

The Small Business Roundtable made recommendations that have directly led to new tools, networks, funding and awareness for small business to build workforce development capacity.

#### BC Employment Program<sup>5</sup>

Another significant provincial labour market program is the *BC Employment Program* (BCEP), a comprehensive employment program that provides employment services and supports to meet the needs of BC Employment and Assistance (BCEA) (“income assistance”) clients who are deemed “expected to work” or “expected to work-medical condition”, and persons with disabilities. The BCEP is delivered by contractors in nine service delivery areas or “bundles” across BC. Contractors are paid based on a combination of fees-for-services and performance.

In 2007/08, BCEP provided \$35 million for individualized employment services to 15,000 employable clients. The average wage for clients placed in a job through BCEP was over \$13 per hour. From June 2001 to June 2006, the number of clients placed in sustainable jobs was 43,534.

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<sup>5</sup> BCEP facts are sourced from Ministry of Housing and Social Development website and at [http://www.gov.bc.ca/meia/online\\_resource/employment\\_programs\\_and\\_community\\_services/bcep/](http://www.gov.bc.ca/meia/online_resource/employment_programs_and_community_services/bcep/) and the Ministry of Housing and Social Development, *BC Employment and Assistance Summary Report*, June 2009.

In addition, the Employment Program for Persons with Disabilities provided \$20 million to have three “prime” contractors deliver employment services to persons with disabilities, utilizing 30 service providers and over 70 community partners.

The provincial caseload has changed dramatically from 85,864 employable cases in 2001 to less than 21,910 employable cases in 2008, a 74.5 percent decrease (Ministry of Housing and Social Development, June 2009). The overall caseload declined 29.4 percent from 151,851 to 107,194 over the same period; however, the persons with disabilities caseload increased 55.5 percent from 42,996 to 66,882 over this period. According to a recent federal scan, these changes are due to employment plan requirements, employment services which assist work-ready clients into the workforce and improvements in the economy (Taylor et al., January 2008). The scan also points out that a greater proportion of the BCEA caseload has multiple barriers to employment and more “strategic, intensive and long term interventions” will be needed for long term labour market attachments of these types of clients.

The EI caseload in BC has also declined by 20 per cent during the period 2002-2007, as a result of BC employment growth. As with BCEA, the remaining EI caseload then had a lower proportion of work-ready claimants (Taylor et al, 2008). Note that since this report was initially completed the BCEA and EI caseloads have increased dramatically in response to the economic downturn.

Without more time and detailed evaluation data for the BCEP and other programs for BCEA clients, it is difficult to discuss the efficacy of such programming. Certainly overall, the caseload reduction was a positive indication, as is increased employment and employment services for persons with disabilities.

Two international reports point to possible areas of enhancement vis-a-vis programs for long-term unemployed. In an independent report on welfare reform for the U.K. Department for Work and Pensions, David Freud suggests directing contracting support for the “hardest to help” and outcome-based (performance) contracting through public-private partnerships “to deliver up-front investment in order to realise savings over the life of the contract...in order to develop a model that allows the government to understand the full costs and benefits of different groups of individuals moving into work” (David Freud, 2007, p. 7). In a very recent American report on sectoral employment initiatives targeted at low-skilled workers, researchers concluded the following:

“...Our findings...suggest that sectoral approaches are both feasible and important for the workforce development field. Strategies combining employment and training services for individual job seekers with efforts to influence the practices of employers and educators or state policies have the potential to be more far-reaching than traditional workforce development programs” (Public/Private Ventures, 2008, p. iv).

Another area about which there has been renewed recalls for reform during this economic downturn is EI policy. Many groups including provincial governments want to see changes in the EI program to make it more flexible and more accessible for workers and employers. Some improvements have been announced by the federal government. There is not room in this report to review this issue, however we need to recognize relationships between active workforce development programming and unemployment and income assistance policies and programs, and the impacts of reform on both.

#### Adjustment and Transition Programming

Another area of labour market programming that will be increasingly important in the context of globalization and economic downturns and increased volatility is labour adjustment and transition. For example, under the federal government's Community Development Trust, BC received \$129 million to provide new opportunities to forest workers. The Trust is a three-year \$129 million initiative that responds to difficult forest sector market conditions. It creates new job opportunities, helps forest workers upgrade their skills, and enables older workers who wish to retire to create opportunities for younger workers through three programs: Tuition Assistance Fund; Transitional Assistance for Older Workers; and, Job Opportunities Program.

Over 5,000 forest workers in communities across the province are expected to benefit from these programs and services. This is a start, but workers in other industries are vulnerable and may be displaced as a result of the current or future economic downturns or specific global shocks.

Also, the Targeted Initiative for Older Workers (TLOW) program is funded under a federal-provincial agreement to enable BC communities to design and deliver projects and services that will help unemployed older workers retrain for new careers. Several projects totaling almost \$10 million and benefiting an estimated 900 workers have been initiated to help older workers transition into occupations in demand. Very recently the federal government has expanded support for this program and introduced the Strategic Training and Transition Fund for non-EI eligible workers.

The new STTF initiative will also provide over \$50 million over the next two years for training and transition services in BC in communities impacted by the downturn.

It is too early to judge the cost-effectiveness of these programs, but they and other transition measures may become increasingly important in the changing global economy.

#### Labour Market Development Program Gaps

Based on this review of major labour market development programs in BC, some of the more obvious gaps are summarized below:

- More up to date regional/industry/occupation specific labour market information that is accessible to employers, job-seekers, program managers, educators, etc.;
- A made-in-BC occupational projection model that is based on up to date information and includes alternative scenarios;
- A stronger capacity to ensure the information about and awareness of programs and resources available to small businesses, communities and job-seekers;
- The need for a clearly communicated provincial strategic framework and coordination across government ministries;
- Better connections or “one windows” between labour supply groups and industries and employers;
- A more direct relationship in programming between workforce development initiatives and business and labour productivity;
- A weak capacity for foreign credential recognition and PLAR.
- Limited industry involvement in planning and program development under the LMDA and LMA agreements.
- Limited adjustment, transition and re-employment programming and capacity among governments, communities and industries.

### **Employer-Based Human Resources Development**

This category of workforce development refers to employer-based human resources and training and development programs. The relationship between these and labour market development programs is that the latter – which are essentially all government-based programs and initiatives – support the former, human resource development (HRD) – which are employer-based, mostly in the private sector. HRD types of programs include the following: needs assessment, human resource planning; orientation; attraction, recruitment, career promotion; retention and engagement; training and development; rewards and recognition; performance management; coaching/mentorship; supports for certain groups of workers. For purposes of this paper, a brief review of HRD performance in BC will focus on employer-based training (excluding industry training covered in the section on ITA) and human resource programs, particularly recruitment and retention.

### Non-Apprenticeship Workplace Training

At present, Canada appears to be under-performing in workplace learning in comparison with other countries. For example, the World Economic Forum gave Canada a ranking of 19<sup>th</sup> for “extent of staff training” (World Economic Forum, 2008). The rate of participation in job-related training in Canada is only average compared to other countries, and is below that of some of our competitors. Less than 30 percent of adult workers in Canada participate in job-related education and training, compared to almost 35 percent in the UK and nearly 45 percent in the US, for example (Goldenberg, 2006).

As a percentage of their overall payroll, US firms spend about 50 per cent more on training than Canadian firms. While overall participation in adult training is increasing in Canada, there are a number of issues of concern identified in *Employer Investment In Workplace Learning in Canada*, completed for the Canadian Policy Research Networks in 2006 (Mark Goldenberg, 2006):

- Employer-sponsored training in Canada has been stagnant. Participation rates in employer-sponsored training and firms' spending per employee have remained virtually the same in recent years.
- Worker training is highly concentrated in Canada, among younger workers, those with higher education and skill levels, and workers in larger firms.
- Measures of "essential skills" show that workers in Canada have lower levels than what is needed, according to international standards, to participate in the knowledge economy. Adult literacy levels in Canada have remained virtually unchanged over the last decade, with over 40 per cent of adult Canadians lacking necessary literacy and numeracy skills.
- Yet, basic skills training remains at the bottom of training priorities (only 2.2 per cent of total training expenditures).
- Almost one-third of Canadian workers report unmet job-related training needs.

A number of factors influence firms' decisions whether to invest in workplace learning. Time and money – the costs of training and the costs of lost worker time – are significant barriers; however, barriers to company training are not only financial. Companies lack information about where to get training and how to organize and provide it. Generally, employers favour investments in physical capital and equipment or other investments, and are not totally convinced of the return on investment of employee training. Many firms worry about "poaching" – losing workers and their training investment when employees are attracted to other employers.

Conventional economic theory holds that employers choose to invest in "specific" training (i.e. specific to the company, industry or workplace), while the state invests in general education and training. However, this division of roles has blurred in recent decades, as employers have become more involved in remedial education, soft skills training, and other general competencies because some workers do not acquire these in school or post-secondary education. Other labour market imperfections and externalities also cause employers to get involved in general training (e.g. general skills for disadvantaged workers) and governments to invest in specific training (e.g. specific technical skills training for displaced workers).

The barriers to training are greater for small and medium-sized firms, who tend to do more informal training. Many training surveys do not capture informal training and learning, which many small businesses rely on. For example, a 2006 Canadian Federation of Independent Business found that approximately "42 percent of SMEs rely on informal training, tutoring, or mentoring to develop their employees' skills, and a further 52 percent use a combination of both formal and informal methods." (CFIB, 2006, p. 11).

A recent BC Chamber of Commerce report concluded the following regarding businesses' training capacity:

“Delivering on-the-job training is onerous for a small business. The process is usually fairly time-consuming, taking either the business owner or a senior level person in the firm away from their productive time at work. As a result, this time devoted to on-the-job training can be quite costly for a small firm in terms of lost productivity, lost business opportunities, less attention to customer service, etc. (2008, p. 16).

Many companies also refer to barriers regarding apprenticeship training. As a BC business group recently concluded, “Traditional apprenticeships do not cover the occupations or skills many small businesses need or if they do, and/or small businesses do not have the resources or expertise to meet training and regulatory requirements” (Coalition of BC Businesses, 2007, p. 23).

Many industry and small business groups have called for training providers to design and deliver more flexible training in terms of where, when and how it is delivered and how it is organized. Online training, training delivered in small bits of time, modularized curricula, flexibly scheduled training (e.g. part-time, weekends, evenings, etc.) are all increasingly popular themes; however, these models have only been implemented to a relatively small degree to date.

Part of the solution to the employer training challenge, is to provide tools and incentives for small businesses to develop an HRD capacity and to encourage groups of small businesses to work together on common training needs. Partnerships between companies and training institutions need to be expanded.

In an April 2009 report on a series of stakeholder roundtables on workplace learning, Saunders recommends that action is needed on workplace training in the following areas:

- “Provide financial incentives, particularly with regard to investment in the development of highly portable skills, such as literacy skills;
- Strengthen the essential skill levels of Canadian workers;
- Improve access to learning opportunities for workers from disadvantaged groups;
- Demonstrate to employers that investment in learning activities usually generates a high return;
- Deliver learning programs that are adapted to the circumstances of the learner;
- Improve the recognition of prior learning;
- Evaluate training programs;
- Help small- and medium-sized enterprises participate in structured learning programs;
- Foster learning partnerships/collaboration among all labour market stakeholders;
- Develop a culture of life-long learning.” (Saunders, April 2009, pp. 16-17).

#### Small Business Human Resources Management

Small business is a critical part of BC's economy; and such firms need tailored supports and tools for workforce development. An on-going policy priority should be how to reach workers, managers and self-employed persons in small businesses to support workforce development.

There is evidence that employers in BC have become much more active in strategies to attract, recruit, retain and develop employees – if for no other reasons, out of necessity in a growing economy, an aging workforce and competition from outside the province. The gaps in HRD tend to be in smaller businesses, including the following types of:

- A lack of human resource and succession planning;
- Barriers to immigrant, temporary foreign worker and international student recruitment;
- Lack of education and post-secondary connections (mentioned earlier)
- Under-utilized talent pools;
- Lack of information and awareness; and,
- Lack of time and resources.

Most BC small businesses do not have HR departments or specialists and need greater capacity to develop and implement effective recruitment, retention and training strategies them to attract and retain workers. Many small businesses do not have the time or inclination to conduct workforce planning or ownership/senior management succession planning. For example, the earlier referenced BC Chamber survey found that two-thirds of those surveyed had no HR plan and 56 per cent did no ownership succession planning (BC Chamber, 2006a).

While larger employers have the resources and expertise to do so, research shows that smaller businesses are less able to recruit under-represented labour force groups such as Aboriginal people, immigrants, persons with disabilities, visible minorities, and women, despite the size of these labour pools. One example of the potential is persons with disabilities. In a BC Chamber of Commerce study regarding hiring people with disabilities, 79 per cent of the respondents agreed with the statement, “Persons with disabilities represent a qualified, but largely untapped pool of potential job applicants”, while only five per cent disagreed and 16 per cent were neutral (BC Chamber, 2006b). Most employers surveyed did not foresee many barriers to recruiting or retaining a person with disabilities.

Another barrier to employers participating in human resources development is a lack of awareness of or information on available programs, supports, tools, resources, etc. As indicated earlier, in WorkBC alone there are over 60 programs, yet many businesses are not aware of most available programs. Another information gap is user-friendly and practical labour market information that businesses and their employees can use to make decisions.

Employers in more remote parts of the province also have much more difficulty in attracting and keeping workers. Inadequate housing, transportation, social services and other infrastructure is a contributing factor in such communities.

One of the positive developments in human resources management in the last decade is the growth of awards and recognition programs for employers who are rated as employers of choice

by employees, peers and others. *Maclean's* "Canada's Top 100 Employers," *Great Places to Work@Institute Canada's* "Best Places to Work," and other lists have profiled many best practices and demonstrated the direct correlation between positive workforce practices and successful enterprises. An important irony is that some companies who are very successful at external branding and selling their products have not applied the same principles and expertise in engaging internally with employees and in branding themselves to potential employees.

Another positive development mentioned earlier has been the increased involvement of industry sector groups in industry training and human resource management programs. The BC Construction Association, the BC Trucking Association, go2, the BC mining industry and some of the ITOs are good examples of how industry leadership have resulted in concrete results for employers and workers. Another interesting new initiative is the creation of an Asia Pacific Gateway Skills Table, which covers many industries and projects and a large part of the province.

In order to succeed, a highly skilled, high-performance workforce strategy for BC must include tailored measures for small businesses.

### **3.4 Summary – Pursuing Outcomes and Quality**

Overall, the BC workforce development systems appear to be moving in the right direction, and such programs have collectively achieved much during the tremendous economic and employment growth and technological change of the last decade. However, many of the indicators of success represent "inputs", "processes", and "outputs" of education, training, employment, labour market and HR programs. In the final analysis, the true test will be the outcomes, the impacts, the long-term results of such activities. While these programs show increased participation and completion and lead to further education, certification and employment, do they ultimately create the major features and comparative advantages of a strong labour market and workforce? Do they go beyond the "means in themselves" to achieve the powerful outcomes of improved competitiveness, productivity growth, labour market flexibility, and adaptation to change and transition?

## ***4. LESSONS FROM WORKFORCE DEVELOPMENT IN OTHER JURISDICTIONS***

### **4.1 Introduction**

This section touches briefly on the status of and what we can learn from workforce development in other jurisdictions. It will draw from interesting trends in workforce development reforms in Commonwealth and European countries, including jurisdictions with newer systems and recent changes with comparable workforce sizes such as Ireland and New Zealand. In considering workforce development systems in international jurisdictions for this paper, we need to keep in mind the limitations of replicating these examples in BC, as two comparative researchers suggest:

“It must be stressed that examples from other countries cannot simply be ‘imported’ and applied to the situation in Canada...Experience with past efforts at educational reform has clearly demonstrated that implants do not normally grow in foreign soil and educational reforms are likely to fail if they are not synchronized with the prevailing culture and the institutional structures within which they are intended to operate. While foreign models cannot be imported, it might be possible to adjust or change existing structures and processes to single elements of these models” (Rubenson and Schuetze, 2000).

While there are interesting trends and models in continental European countries—Austria, Germany and Switzerland in particular—the workforce cultures and traditions and these “dual” systems of training are so strongly embedded in the institutional context/framework of those countries that it is difficult to transplant more than specific program features or procedures.

All industrialized countries are also facing significant demographic shifts. For example, in 2030, the European Union is forecasted to have 2.3 million fewer vocational education and training students aged 15-24 than in 2005 – a drop of 17 percent from 14.2 million in 2005 to 11.9 per cent in 2030 (European Centre for the Development of Vocational Training, November 2008). Assuming a constant rate of participation, the number of vocational program graduates will decrease in the EU by 600,000 between 2005 and 2030. European Centre for the Development of Vocational Training (ECDVT) projections for some EU countries is: Germany – from 2.34 million to 1.87; France – from 1.9 million to 1.84; Poland – from 1.22 to 0.72; and, UK – from 2.42 million to 2.165.

Another factor in common with North American labour markets is increasing skill levels and education requirements. For example, between 1996 and 2020 EU countries expect highly qualified jobs will increase from 20.8 per cent of total employment to 31.3 per cent; and jobs with mid-level qualifications will increase from 45.8 per cent to 50.1 per cent; while low skilled jobs are expected to decrease from 33.4 per cent to 18.6 per cent in EU countries (ECDVT, December 2, 2008). This has caused the European Commission to set bold targets in its *Lisbon Strategy*:

“The answer to the challenge of globalization is not to turn in on ourselves by relying on new forms of protectionism, but to innovate...Under this strategy, EU countries have agreed on a number of precise targets and indicators for their joint efforts to create more jobs and growth. The main ones are that by 2010 the employment rate should have increased to 70% and investment in research should have risen to 3% of GDP” (European Commission, 2008, p. 3).

The EU has also set specific targets for employment and education; for example, one goal is that every young person who becomes unemployed will be offered a job, apprenticeship, training or other measure within four months by 2010” (European Commission, 2008).

#### **4.2 Highlights of International Jurisdictions**

According to literature reviewed, some of the key trends in vocational education and training are:

- The introduction or expansion of national qualifications frameworks;
- More systemic vocational education and training reforms, including a learning outcome orientation;
- Improving quality of and accountability for vocational education and training through results-management regimes;
- More focus on career counseling; and,
- The validation of non formal and informal learning.

A major trend in Australia, Europe and New Zealand is national qualifications frameworks (NQFs) including NQFs specifically for vocational education and training. Occupational qualifications are issued by national and regional agencies, vendors, large companies, chambers of commerce and industry, sectoral professional associations. According to the EU, this proliferation of qualifications carries a risk of undermining the value and creating overlap and duplication, and makes it more challenging for people to have their skills, credentials and experience recognized when moving between countries, regions, sectors, occupations and companies (EU, July 2008). As a result, the EU has created the *European Qualifications Framework* (EQF) to move qualifications away from an institutional approach to a qualifications approach, based on the concept of learning outcomes. As an EU document states, “this means that the comparison and combination of different certificates and diplomas should no longer be based on the question of ‘who issued your qualification’ but on what you know, understand and are able to do” (ECDVT, November 13, 2008, p. 1).

This shift makes it possible for learning acquired outside formal education and training (e.g. at work or during personal time) can be formally recognized as part of a qualification and credential. It can also facilitate transfer and recognition of what previously were incompatible certificates and diplomas awarded by governments, institutions and others.

The Australian Qualifications Framework (AQF), for example, was introduced in 1995 and fully implemented in 2000. It is based on “reference qualifications (in contrast to EQF which is a descriptor-based framework), and relates all qualifications across Australia’s federal states by defining the characteristics of a common set of qualifications across schools, vocational education and training and higher education” (ECDVT, 2007, p. 74). Characteristics of the Australian vocational qualification system include the following:

- Industry-driven vocational qualifications, with specified combinations of units of competency required by each industry for each qualification;
- Qualifications are sequenced, allowing students to move readily from one qualification to another; these units accumulate on the student’s record of achievement;
- To be assessed as competent for a vocational qualification, students must prove they can use their skills and knowledge in the workplace; and students can be assessed for the skills and knowledge gained informally in previous work;

- Approved training providers are accredited to provide training and issue qualifications according to the requirements of the AQF (ECDVT, 2007).

European countries are also pursuing a variety of more flexible workforce pathways through:

- Linking initial, higher and continuing vocational education and training via formal mechanisms;
- Expansion of post secondary and tertiary vocational education;
- Modularization of programs and “double qualifications” (i.e. “dual credit” in BC);
- Broadening access to and strengthening the quality of career counselling;
- Using NQFs to improve flexibility and facilitate recognition of prior learning;
- More of a focus on overall quality in vocational education, including emphasis on redesign of programs/curricula, and on educational and occupational standards; and,
- Increasing the depth and breadth of stakeholder involvement.

Vocational education and training reforms around the world have also focused on strengthening the links between such programs and the labour market and workforce development. This includes involving sectors and “social partners” more in vocational education and training decision-making, governance, management and delivery through their involvement in designing vocational education and training policies, programmes, qualifications and standards, assessing skills and competences, validation of qualifications, etc. As a result, greater industry involvement has been realized through sectoral councils to identify labour market needs; and business and labour groups are being involved to a greater extent in financing vocational education and training, managing funds and providing continuing education opportunities.

According to a recent Canada West Foundation (CWF) report, over the last 40 years, the Irish government has treated investment in human capital as a top priority. This started with free high school education and higher level technical training in regional technical colleges, to the extent that “the country has significantly boosted participation rates and helped the country meet the demands of its rapidly growing economy” (CWF, 2008, p. 6). The CWF concluded that Ireland’s emphasis on education in the 1960s “was probably the single most important factor leading to its re-invention in the 1980s. Corporate tax cuts pale in comparison.” (CWF, 2008, p. 18).

Regarding small business needs specifically, Dawe and Nguyen identified strategies that work for small businesses in an Australian context (NCVER, 2007):

- Linking training to business performance—increased profit, growth or survival;
- Linking training to specific stages in the business cycle;
- Contacting small business managers personally to analyse their business needs
- Providing ongoing business support through a business organisation or training adviser;
- Minimising time spent away from the workplace;

- Integrating formal training and learning with informal learning processes in the workplace;
- Lowering costs of training by collaboration with other businesses or through financial incentives, such as a government subsidy or ‘interest free’ loans;
- Ensuring that facilitators and trainers have the appropriate networks and experience to enable them to be trusted and respected by all business participants.

In 2007, the Business Council of BC published a comprehensive review of labour market needs, immigration programs, foreign credential recognition and employment in Ireland, New Zealand, Australia and Canada (Business Council of BC, March 2007). While its focus is heavily weighted to looking at policies regarding immigrants and foreign workers and students, many of the report’s findings and recommendations have implications for broader workforce development strategies.

The Business Council report identified positive features and best practices within such themes as: responsiveness/competitiveness; labour market/employer needs in the permanent migration system; retention of skilled migrants; qualifications frameworks for foreign credential recognition; and employer-oriented program goals. The report also offered several recommendations for governments of BC (e.g. produce one set of labour market information for BC, offer a “one-stop shop” for both permanent and temporary foreign workers) and Canada (e.g. streamline the process, reflect labour market needs in the permanent Skilled Worker program, increase prominence of Foreign Credential Recognition in the migration process, accelerate national harmonization of regulatory standards).

#### **4.3 International Lessons Learned Regarding Industry Training**

Regardless of the international jurisdiction, there are some common trends workforce development and industry training reform. To some degree these transcend political ideology and respond to economic, social and demographic drivers. Below is a summary of the common industry training trends across many major international jurisdictions:

- *Modularization of training* – There is no longer a debate in Canadian or international jurisdictions on the modularization of curriculum and formal industry training programs. Indications of this range from Alberta’s Individual Learning Modules to modular training packages in Australia and New Zealand (e.g. “units of competency”), as well in more traditional systems such as Ireland and the U.K.
- *Competency-based assessment and training* – While this training innovation is not as widely accepted as modularization, most international jurisdictions reviewed have adopted some degree of competency-based industry training models. This is particularly the case in Australia and New Zealand. The key factor for adopting a competency-based approach is the introduction of practical assessments, particularly during on-the-job parts of industry training. Australia in particular, and New Zealand have introduced the role of workplace assessors which facilitate on-the-job assessments and prior learning assessment and recognition. While other jurisdictions have adopted a competency-based

- approach (e.g. Ireland), they have not totally departed from a time-based system; at least in traditional trades, many of the apprenticeships continue to be 3-4 years in duration.
- *Learning outcomes* – European and Commonwealth countries are shifting to using measurable learning outcomes in vocational education. The European Qualification Framework defines these as, “statements of what a learner knows, understands and is able to do on completion of a learning process” (ECDVT, 2008a, p. 15). This trend is in contrast to traditional time-based and norm-based assessment of learning.
  - *New occupations and sectors* – All international jurisdictions have expanded their industry training systems to serve emerging industries and occupations not traditionally served by apprenticeship. In fact, much of the growth in many international industry training systems has been from new apprenticeships and traineeships and modern apprenticeships (e.g. Australia, New Zealand, U.K.).
  - *New training programs that are more inclusive and flexible* – Not only are “new apprenticeships,” “modern apprenticeships,” and “industry traineeships” serving new occupations; they are opening up traditional apprenticeship and facilitating better access for members of under-represented groups, youth and others.
  - *Increased efforts to start vocational training and apprenticeship in secondary school* – While entering industry training and vocational education have traditionally started at an early age for German and Austrian teenagers, new types of apprenticeships and traineeships have been introduced to facilitate participation in industry training during secondary school years in most Commonwealth countries reviewed..
  - *Flexible delivery of training* – International jurisdictions have encouraged industries and training providers to offer more flexible training delivery in terms of scheduling of training, on-line learning, the use of off-site training centres, and self-study of training modules.
  - *National vocational standards frameworks* – Canada appears to be one of few major industrialized countries to have not adopted a national vocational qualifications system. In such systems, apprenticeship and industry training credentials are positioned as part of a broader system of vocational qualifications with pathways among all levels.
  - *Financial incentives for employers* – Most international jurisdictions have varying degrees of incentives for employers and individuals who participate in industry training. These range from tax incentives to wage subsidies to grants. These incentives are used stimulate particular priority areas in each jurisdiction, such as innovation, emerging industries, hiring youth and under-represented groups, etc.
  - *Efforts to improve the quality and assessment of on-the-job training* – An industry training system cannot adopt a competency-based assessment model of training without the tools and skills to provide work-based assessments of the quality of training and competencies. Most major international jurisdictions have increased the emphasis on improving the quality of on-the-job assessment of competencies.
  - *Third party delivery of industry training services* – There has been a growing trend in using non-government organizations to administer and deliver industry training services.

- This is reflected in Learning and Skills Councils in the UK, New Apprenticeship Centres in Australia, and Modern Apprenticeship Coordinators in New Zealand.
- *Initiatives to increase the participation in industry training of under-represented groups* – Many international jurisdictions include in their industry training priorities the need to increase the participation in industry training among women, persons with disabilities, visible minorities and indigenous peoples.
  - *More industry driven/led involvement (ownership)* – Formal industry structures and/or governance of industry training by industry training organizations is prevalent among all international jurisdictions reviewed. This is particularly strong in German and Austria through the Chambers of Commerce, and in Australia and New Zealand through industry training organizations.

In a CPRN-sponsored research report on lessons from other countries regarding incentives for employer-sponsored training, researchers reviewed OECD countries regarding the following categories of policy instruments (Canadian Policy Research Networks, March 2009, pp. 4-5):

- *“Inform/Engage* – Governments may try to influence behaviour by providing information, including research results that would not be (adequately) provided in the market. This type of instrument can also involve efforts to promote commitment through dialogue or persuasion.
- *Spend/Tax* – This type of instrument includes grants, subsidies, and tax expenditures. It could also include special taxes to fund these expenditures (such as payroll levies).
- *Regulate* – This would include laws/regulations that specify a level of investment in training and penalize those who do not comply. It would also include processes for accreditation of providers and certification of participants.
- *Provide Directly* – This involves the provision of the training by a government department or agency.”

The report does not definitely draw conclusions on what lessons could be applied to Canada to improve employer training, however its general conclusion is that...“the evidence available suggests there is scope in Canada for engaging labour and business in setting priorities, disseminating information about training programs, continuing to support the development of sectoral labour market organizations, and providing financial incentives targeted to SMEs and less-educated workers” (p. 26). Since the researchers a shortage of empirical evidence in this area of inquiry, the report suggests priority should be giving by governments to support formal evaluation of policy measures to stimulate employer investment in training.

Finally, a recent ECDVT cross-country analysis of seven EU countries found critical success factors for establishing targets and outcome standards for vocational education and training systems are ECDVT, 2008c, p. 97):

- Provide clear objectives, which are essential for managing training activities;
- Result from a process which involves stakeholders;
- Are universally acknowledged and shared;

- Are familiar to all people working in the system;
- Motivate people to achieve concrete results;
- Are stated in unambiguous terms and therefore easy to evaluate; and,
- Allow systems to be compared.

#### **4.4 Alberta**

While there are specific best practices and examples of innovative programs in other parts of Canada, there is not a single province overall that BC can learn from in terms of an effective, comprehensive, strategic approach towards workforce development. An exception to this to a certain degree is Alberta, a partner on TILMA and other initiatives. Three themes are of particular relevance:

##### A long-term strategy and multi-sector, multi-stakeholder planning and execution

In 2006, the Alberta Government released *Building & Educating Tomorrow's Workforce* (BETW) a 10-year labour force strategy that includes sector-specific strategies for Forest, Non-Profit, Construction, Manufacturing, Energy, Tourism and Hospitality, and Retail sectors in Alberta (Government of Alberta, 2007). This long-term strategy focuses on four goals and themes: inform; attract; develop; and retain. BETW has been seen by industry groups in BC as a positive model for collaborative workforce planning and development. Alberta ministries are highly coordinated in BETW activities, as part of a strategic, integrated cross-government and industry plan.

##### Apprenticeship and trades training

Alberta has the largest apprenticeship system in terms of numbers of people registered as apprenticeship – on a per capita basis it is much larger than any other Canadian jurisdiction. Although Alberta has only 10 percent of Canada's labour force, it trains more than 20 percent of the Canada's apprentices. The Northern Alberta Institute of Technology is the largest deliverer of apprenticeship training in the country. As of December 31, 2007, there were 67,274 registered apprentices in Alberta, almost double BC's with a smaller population (Alberta Apprenticeship and Industry Training Board, 2008).

Apprenticeship registrations in Alberta have increased by 149 percent since 1997, and 45 percent in the last two years (Alberta Apprenticeship and Industry Training Board, 2008).. There are a number of factors that gives Alberta's apprenticeship system an edge over other provinces. Both the huge growth in trades from the Oil Sands and the large number of "compulsory" trades in Alberta drives demand for Alberta apprenticeships to a certain extent.

##### Labour market information

Over the last decade, the Alberta Government has significantly increased its capacity for identifying labour shortages and job vacancies as well as developing a new made-in-Alberta model for occupational forecasting. The other key capacity Alberta has is a labour supply forecasting model. A review of Alberta Employment and Immigration's Labour Market Information

website at <http://employment.alberta.ca/cps/rde/xchg/hre/hs.xsl/2656.html> will show a comprehensive and impressive list of LMI products that may represent the best LMI capacity across Canada; for example:

- Alberta Modified Canadian Occupational Project System (COPS) Outlook 2008-2012
- Alberta Occupational Demand Outlook, Alberta Regional Occupational Demand Outlook, and Alberta Regional Population Outlook for 2007-2012
- Alberta's Occupational Demand and Supply Outlook (2007-2017)
- Alberta's Supply Outlook 2007-2017: Visible Minorities, Aboriginals & People with Disabilities
- Alberta's Supply Outlook Model: Education and Skills (2007-2017)

Alberta also has a network of labour market information centres throughout the province that offer various LMI and career planning services and resources and serves a variety of clientele, including new immigrants, provincial migrants, employers and those searching for work and training opportunities. The Alberta Government has had a history of strong career planning and development capacity over the last two decades.

#### **4.5 Summary**

How are these trends in workforce development in other jurisdictions working? How effective have these developments been in terms of workforce development outcomes in each country? Overall, the quantity and variety of outcomes (i.e. credentials, employment, etc.) have increased significantly in jurisdictions such as Australia, New Zealand and Ireland over the last decade. Industry and employer involvement has increased and been sustained. Standardization and quality assurance of workforce development programs have improved. More young people and members of under-represented labour force groups are participating in training and employment. Also, improvements are apparent in the recruitment, utilization and recognition of the training/credentials/skills of immigrants in Australia. This brief review of international jurisdictions shows that BC's workforce policies and programs in recent years and currently are consistent with many success factors of international systems.

### **5. CRITICAL SUCCESS FACTORS FOR A HIGHLY SKILLED, HIGH-PERFORMANCE WORKFORCE**

This section offers some critical success factors for realizing a highly skilled, high-performance workforce and effective workforce development strategies. It is based on the preceding review of and lessons learned from other jurisdictions, in the context of BC's key labour market challenges, the current state of workforce development in BC, and the performance of existing measures. These factors are clustered under nine themes.

#### **1. A Strategic Approach**

- *A jurisdictional vision and strategy* – Developing a forward-looking vision for 2020 and a long-term plan and strategies.
- *Linkages to business planning and economic plan* – Linking workforce planning and development directly to economic planning and business planning across government and industry sectors.
- *Linkages to productivity improvement* – Designing and funding programs that directly support business and workforce productivity improvement.
- *Long-term, “investment” focus* – Treating workforce development as an investment with direct short and long term returns on investment.
- *Holistic approach* – Integrating workforce planning and workforce development with other policy areas, particularly economic, social, and regional development; and recognize that non-workforce development programs impact the workforce (e.g. housing, transportation, infrastructure, child care, etc.).
- *Anticipatory* – Looking ahead and developing strategies that will be relevant to the future economy and labour market and which are flexible enough to change or adapt to emerging developments.
- *Think globally* – Reflecting in policies and programs the reality that BC is not “an island” and is part of a global economy and labour market.

## **2. Evidence-Based, “Measurement” Culture**

- *Evidence-based policy and program development* – Developing and designing policies and programs based on empirical data and evaluation/review evidence, and on clear indications of what is working, what has worked elsewhere, etc.
- *Bench-marking* – Developing specific benchmarks for workforce development.
- *Clear targets, indicators, measures* – Setting specific workforce indicators, measures and targets for all workforce development programs.
- *Monitoring, measurement and evaluation* – Regularly monitoring, measuring, evaluating and reporting on workforce development policies, funding and programs.
- *Expansion of learning outcomes* – Expanding the use of learning outcomes (what one knows, understands and is able to do as a result of learning) in technical and vocational education.

## **3. Strategic and Tactical Information**

- *Information to support planning and decision-making* – Developing systems to gather and analyze workforce and workforce development data to support policy, funding and program decisions.
- *Intelligence-gathering and distribution* – Developing a capacity to track and collect workforce intelligence (e.g. “early warning”) data and “package” and share with policy-makers and program managers, and stakeholders.
- *Awareness-building* – Effecting a government role in building awareness about the importance of workforce development and evidence of what is effective and why.

- *Effective communication* – Effective, easy communication on an on-going basis between governments, industries, employers, labour, service providers, communities, clients, etc.
- *Cultural relevance* – Ensuring programs, program information and communications are culturally relevant and responsive to stakeholders and clients.

#### **4. A Collective Approach Among Stakeholders**

- *Clear roles* – Agreement on clear roles among major workforce development partners, particularly governments, industries and employers, workers, and service providers.
- *Collaboration and partnerships* – Influencing and stimulating collaboration and partnerships among workforce development stakeholders.
- *Coordination* – Strengthened coordination among government agencies, labour supply groups, and service providers to increase synergy and eliminate program and jurisdictional overlaps and duplication.
- *Cost-sharing among those who benefit* – Using funding models that reflect the principle of those who benefit should share the costs of workforce development programs.

#### **5. Effective, Innovative Service Delivery**

- *Customer-driven (employers, workers, learners, industries)* – Workforce development programs and services should be accessible and responsive to their customers.
- *Engagement of employers and workers* – Programs and services that actively engage employers and workers, by creating awareness, showing relevance, listening to what they need and how these needs should be met, and stimulating their participation in workforce development.
- *Flexible delivery* – Programs and services should be delivered in ways that make it easier for participants to access workforce development (i.e. scheduling, content, location, etc.).
- *Local, community-based* – Programs and services should be developed for and delivered at the community-based level whenever possible, or at least facilitating local participation through flexible delivery and distributed learning.
- *Practical tools* – Programs and services should include tools and resources that can be readily used by workers, small businesses, and communities.
- *Innovation* – Encouraging/rewarding new, effective business practices/delivery models.

#### **6. Comprehensiveness**

- *All industries, occupations and regions* – Workforce development strategies that address the needs of all industries, occupations and careers and regions in which it is needed.
- *All sources of human resources* – Jurisdictions, employers and regions or communities should consider and tap as many sources of labour as possible.
- *Life-span development* – Supporting the on-going (life-span) career planning and development for students, workers and job-seekers.
- *All timeframes* – Planning and developing strategies for workforce development in the short, medium and long term.

## 7. Transferability

- *Mobility* – Developing and delivering policies and programs that facilitate worker/ learner mobility between countries, provinces, regions, industries, professions and occupations, and education and training programs and credentials.
- *Standards* – Developing and using standards for education and training programs and curriculum, labour market development and human resources development that reflect provincial, national and international standards.
- *Quality assurance* – Ensuring programs, services and standards meet quality standards and are regularly monitored and adjusted.
- *Mechanisms for recognition* – Streamlining and expanding formal prior learning assessment and recognition, foreign credential recognition and other qualifications assessment mechanisms to increase mobility and maximize utilization of BC’s workforce.
- *Expansion of Credit Transferability* – Expanding vocational education and training credit beyond traditional institution-based learning to formal learning that occurs at the workplace, in the community, and in private career colleges.

## 8. Facilitation of Transition

- *Early warning* – Developing mechanisms to identify the need for labour market transition and adjustment.
- *Quick response capacity* – Developing and funding capacities among stakeholders and service providers to respond quickly to emerging workforce development needs.
- *Facilitating adjustment and transition* – Reflecting positive principles for responding to and facilitating (not preventing) workforce adjustment and transition.
- *Adaptive, flexible programming and tools* – Designing programs and services so that they can be changed and adapted or flexibly applied to changing workforce circumstances.

## 9. Inclusion

- *Members of the population under-represented in the labour force/employment* – Ensuring programs and services enable access to and success by members of demographic groups under-represented in the labour force, employment and training.
- *Small business-friendly* – Designing and funding programs and services that are targeted to smaller businesses and their unique barriers to participation in workforce development.
- *First Nations and Aboriginal communities* – Ensuring workforce development programs and services include measures to facilitate the participation and completion by First Nations people and members of Aboriginal communities.

These features of successful workforce development systems should be considered in developing a highly skilled, high-performance workforce and developing workforce strategies for BC.

## **6. A STRATEGIC FRAMEWORK FOR WORKFORCE DEVELOPMENT**

This section offers a strategic framework for workforce development in BC, including a strategic direction, principles, a framework for identifying and measuring progress, and options for action.

### **6.1 Framework for Workforce Development**

This framework is predicated in part on the importance to the BC economy of improving labour productivity. The OECD identifies labour market policies that can directly affect productivity through a number of other mechanisms (OECD, 2007):

- Policies that influence incentives for workers or firms to invest in training or education can affect productivity by altering the stock of human capital;
- Policies that encourage the movement of resources between declining and emerging sectors;
- Policies can enhance productivity by helping firms respond quickly to changes in technology or product demand;
- Policies that improve the quality of job matches or maintain high-quality job matches for longer may increase the efficiency of labour resource allocation, thus increasing the level of productivity; and,
- Policies that reduce social conflict might influence workers' efforts and their willingness to align their behaviours with their employer's objectives (p. 65).

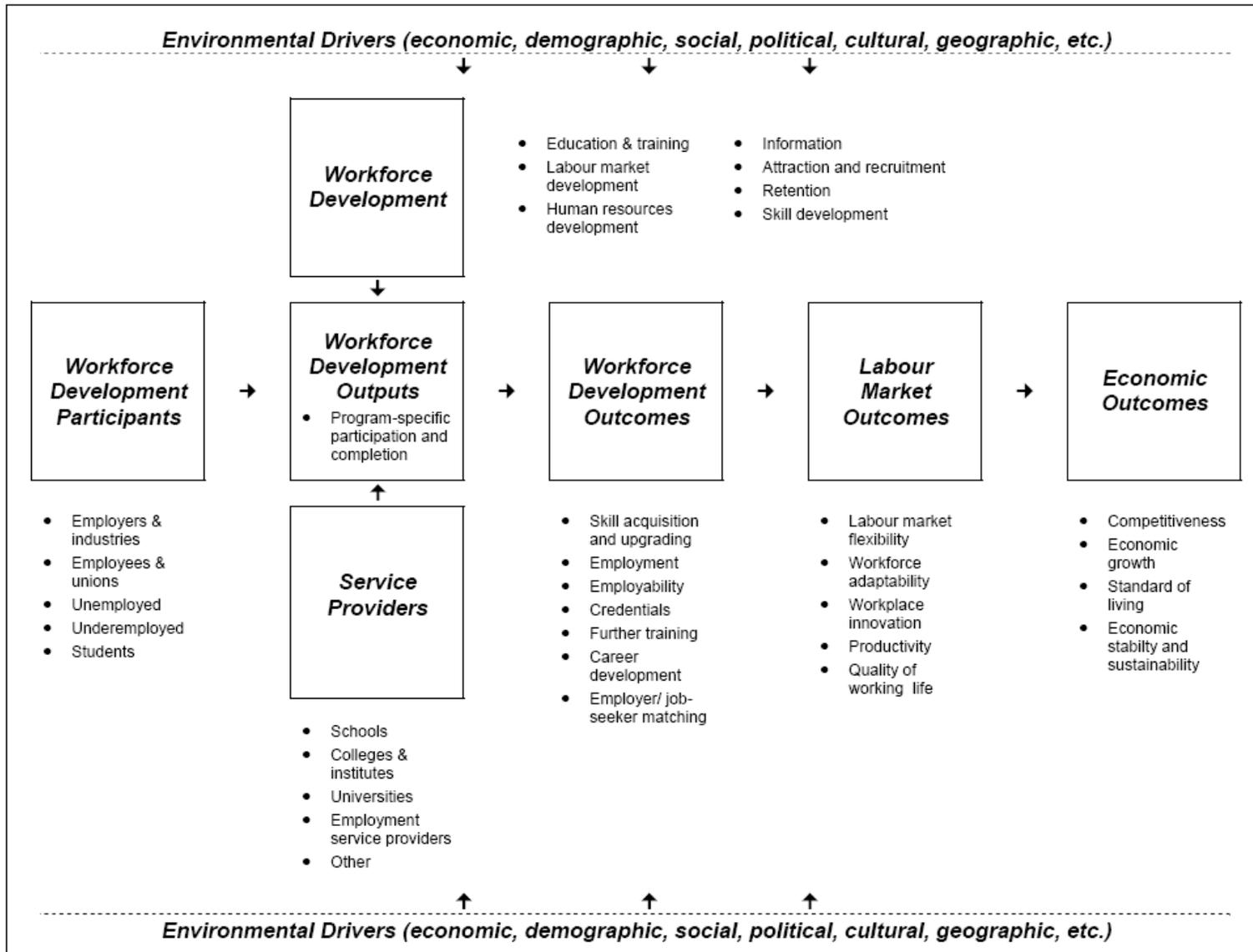
The point here – as was made earlier in this paper – is that workforce development policies and programs that positively effect business and labour productivity should be a key priority for BC.

Figure 3 on the next page shows the relationship between workforce development, various levels of outputs and outcomes, and positive labour market performance in BC. The components of this framework are:

1. *Environmental drivers* – Key factors in the workforce environment that affect workforce development and its outputs and outcomes.
2. *Workforce development participants* – Employers and industries, employees and unions, unemployed people, underemployed people and students.
3. *Workforce development* – The workforce development policies, programs, services, resources and tools described earlier that facilitate necessary information, attraction and recruitment, retention and skill development.
4. *Service providers of workforce* – Education, training, labour market and employment service providers.
5. *Workforce development outputs* – The (program-specific) outputs that directly result from workforce development.

**Figure 3**

**A Strategic Framework for BC Workforce Development**



6. *Workforce development outcomes* – The immediate outcomes of workforce development, including skill acquisition, employment, credentialing, career development, matching of labour with employers, etc
7. *Labour market outcomes* – Long-term labour market impacts and changes in the workforce and labour market resulting from workforce interventions.
8. *Economic outcomes* – Long-term economic impacts of labour market changes

In addition to the relationships and sequencing of these components, a key point of this framework is that workforce development in itself should be considered as a means to an end for public policy. The direct outputs and outcomes of workforce development are valuable and beneficial to participants, but they should not be considered as the ultimate ends; workforce development needs to more directly lead to and support labour market and economic outcomes.

### **6.2 A Strategic Direction for BC Workforce Development**

Below is a vision for Canada's economic advantage recently published in an op-ed column by Tom Brzustowski, a former Ontario Deputy Minister and a member of The Order of Canada, and currently a professor at the University of Ottawa

“The Canadian work force is highly competent and creative, and lifelong learning in many forms keeps it up to date. Unemployment is very low, and many well-paid and satisfying jobs are being created for both knowledge workers and the trades. Productivity growth is high and sustained, and Canadian companies are competitive by world standards. The business ethos is one of added value and innovation with favourable environmental impact, as entrepreneurial Canadians continue to develop new ways to create wealth using their knowledge, skills, imagination and creativity, as well as local access to the sources of new knowledge and to the necessary capital. This means that the Canadian private sector is constantly working to move up the value chain, using innovation and smart management to overcome the impacts of competition and of the demographics of the work force” (Tom Brzustowski, Financial Post, October 24, 2008).

#### **Vision**

Brzustowski's vision is a very appropriate picture to which BC labour market stakeholders can aspire. As part of the framework in this paper, a Vision Statement for British Columbia's workforce development is offered here as follows:

***A highly innovative, creative and competent workforce that is supported by high-performance organizations, a learning culture, career development and opportunities to maximize its contribution to productivity improvement and economic growth.***

#### **Strategic Goals**

In its “Future of Work” study for the BC Government, the Conference Board of Canada offered four “tools for addressing labour gaps (Conference Board of Canada, 2008):

- Increase supply of workers by making more effective use of *under-represented* populations;
- Increase supply of workers by attracting international and interprovincial migrants;
- Increase the skills and skill relevancy of workforce by investing in education and training to improve their performance and competitiveness; and,
- Increase investment in technology and improve capabilities for utilizing technology to drive higher productivity (p. 2).

These are appropriate long-term goals for addressing labour shortages, but alternatively – and consistent with the broader framework provided here – beyond addressing shortages only but rather fundamental labour market outcomes – could be used as strategic goals.

Similarly, an Atlantic Institute for Market Studies-sponsored report identifies a small finite number of options a jurisdiction has for closing the gap between demand for and supply of labour (this author added the fourth one) (J.D. McNiven, 2008):

:

1. Find more people (i.e. increase birth rate, immigration and/or interprovincial migration);
2. Increase labour productivity;
3. Increase the labour force participation rate; and,
4. Increase the utilization and retention of the existing workforce.

However, again, the above goals are more means to ends; BC's labour market goals should reflect the ultimate outcomes of such policy instruments:

- Increasing labour productivity;
- Increasing labour market flexibility;
- Increasing workforce adaptability to changing circumstances;
- Increasing workplace, workforce and workforce development innovations;
- Increasing the quality of working life.

These should be the ultimate goals of workforce development policies, and they would be supported by the types of workforce development outcomes in the framework.

### **Principles**

The many of the critical success factors identified in the previous section can be used as values or principles with which to pursue this vision and goals. Additionally, given the strategic framework provided, a few key themes are important to single out.

### Drivers of Productivity

The New Zealand Workplace Productivity Working Group identified and promoted “seven drivers” of productivity for business to follow (see [www.dol.govt.nz/workplaceproductivity/productivity/drivers/index.asp](http://www.dol.govt.nz/workplaceproductivity/productivity/drivers/index.asp)):

- Building management and leadership capability;
- Creating productive workplace cultures;
- Encouraging innovation and the use of technology;
- Investing in people and skills;
- Organizing work;
- Networking and collaborating;
- Measuring what matters.

### High performance organizations

Employers and workforces should be encouraged to pursue the goal of a high-performance organization:

- High value product (high quality, specifically tailored to specifications as required by customers);
- Efficient technology (in both meeting product specification and reducing cost through high output, low waste, minimal defect, etc.);
- Innovative processes (including through the way that work is organized);
- Workforce input that is supportive and willingly engaged.

*TeamTime* training for lean manufacturing, sponsored by Canadian Manufacturers & Exporters BC Division and others is a good example of putting this into practice (see [http://www.cme-mec.ca/bc/template\\_bc.asp?p=1](http://www.cme-mec.ca/bc/template_bc.asp?p=1)).

### Sustainable Workforce Policies

The principles of sustainable environmental practices can be applied to labour market and human resource development. Sustainable workforce development policies could reflect the following:

- Reducing turnover and increasing completion
- Reducing skills “wastage” of unemployed and under-employed people
- Utilizing talent through redeployment of displaced workers
- Recycling one’s workforce by using mature workers
- Tying workforce activities to productivity improvements
- More directly tying workforce activities to the business plan

### Strategy/Policy Comprehensiveness

Workforce development in BC should be supported through a full range of both labour demand and supply options; there are not “quick fixes” or panaceas in workforce development.

*Reducing demand for human resources*

- Technology and other means of productivity improvement;
- Business process redesign;
- Workforce optimization;
- Outsourcing.

*Increasing supply of human resources*

- Retention of existing employees;
- Immigration;
- Interprovincial migration;
- Education and training graduates (K-12, post-secondary, private and community training);
- Hiring unemployed;
- Hiring members of under-represented, under-utilized labour force groups;
- Diversity initiatives;
- Retaining or recruiting older workers;
- Cross training and internal promotions.

The “comprehensiveness” theme can also be applied to specific areas of workforce development. For example, a comprehensive approach to recruitment of immigrants, and retention of foreign workers and students should be promoted to and supported by employers. This should also include emphasis on developing and better utilizing the talents of immigrants already in BC, providing them with opportunities to acquire Canadian experience, develop language skills, obtain credential recognition, etc. This comprehensive approach should promote awareness of and access to a full range of options:

- *Recruiting permanent immigrants:*
  - Skilled Worker category
  - Provincial Nominee Program
  - Recruitment missions
- *Recruiting and retention of temporary foreign workers:*
  - Foreign Worker Program
  - Working Holiday Program
  - Student Working Holiday Program
- *Recruiting and retention of international students*
- *Better utilization of existing immigrants:*
  - Foreign credential recognition
  - Advanced language training
  - Mentoring and work experience
  - ESL and Bridging programs

Clarification of and Agreement on Roles

There should be recognition of a rationale for a government role in workforce development. Labour market externalities, market imperfections, equity goals, stimulating action, providing

infrastructure and a conducive environment for workforce development are key reasons for government's role in this policy area. Table 1 lists key roles in workforce development among government, business and industry and individuals (e.g. employees, unemployed, students, etc.). It is adapted from a Ministry of Finance discussion paper on the Training Tax Credit Program.

**Table 1**  
**Roles in BC Workforce Development**

<b>Role of Government</b>	<b>Role of Business and Industry</b>	<b>Role of Individuals</b>
<ul style="list-style-type: none"> <li>• Analyzing labour market conditions and working with industry to gather and distribute information on labour market trends.</li> <li>• Setting strategic direction by aligning labour market policy with economic policy priorities. This includes strategic investments in skills and training.</li> <li>• Putting appropriate governance structures in place for our education and skills training system.</li> <li>• Taking steps to help labour supply and demand connect. Where markets fail, government has a facilitative role to play in connecting the two sides of the labour market.</li> <li>• Accountability for effective investments in public education and training.</li> <li>• Incentives to encourage employers and employees to fill training gaps.</li> </ul>	<ul style="list-style-type: none"> <li>• Recruiting new workers, including clear communication of hiring intentions to prospective employees.</li> <li>• Seeking out non-traditional sources of workers and removing barriers.</li> <li>• Recognizing the benefits of a multicultural workforce.</li> <li>• Retaining existing employees, including career development.</li> <li>• Providing compensation that reflects market rates.</li> <li>• Investing in firm- and industry-specific skills development.</li> <li>• Facilitating completion of training for employees.</li> <li>• Making investments to improve productivity.</li> <li>• Ensuring workplace safety.</li> <li>• Defining skill needs/standards and communicating to training providers.</li> <li>• Developing and making available sector and company specific LMI.</li> <li>• Company and sector HR planning.</li> </ul>	<ul style="list-style-type: none"> <li>• Self-investment in workforce development that directly benefits them.</li> <li>• Seeking employment.</li> <li>• Participating in skills development opportunities.</li> <li>• Engaging in lifelong learning.</li> <li>• Awareness of current labour market conditions.</li> <li>• Using Labour Market Information to assessing the monetary and non-monetary benefits of career choices.</li> </ul>

Source: Ministry of Finance. *Training Tax Credits Discussion Paper*. July 2006.

It is important – at least at a broad level – that there is some degree of agreement on roles among the labour market partners in BC. Without this basic agreement, it is difficult to have a true provincial strategy and everyone/most stakeholders working towards the same goals.

### **6.3 Areas for Optimizing Workforce Development**

A set of areas or options where action might be considered is offered below:

1. ***Reflect priority labour market outcomes in the planning, design, measurement and evaluation of workforce development programs*** – As per the framework provided here,

include labour market flexibility, productivity (see below), labour force adaptability, workplace innovation, quality of working life, etc. in policy frameworks and program logic models.

2. ***Directly link workforce development to improving productivity*** – Workforce development policies and programming should include clear goals, indicators and measures that show how workforce development will improve business and labour productivity. Program logic models should go beyond training, employment and retention outcomes to how programs can increase productivity. Governments should encourage and support investment in productivity-enhancing technology and related skills development.
3. ***Directly link workforce development to supporting global competitiveness*** – More workforce development policies and programs should reinforce and support companies to be able to compete internationally. This includes helping small businesses in exporting products and services and providing employees with “international” skills such as trade skills, cultural awareness, language skills, etc. The new Asia-Pacific Gateway Skills Table could be a useful agency for achieving these goals.
4. ***Encourage, incent and support private sector innovation in workforce development, particularly among small and medium sized enterprises*** – Use and promote a “high-performance organization” model to promote effective business “people” practices and employers of choice. Provide simple, really practical tools, resources and awareness-building for and stimulate partnerships among small and medium sized businesses.
5. ***Directly link workforce development planning with economic, business and succession planning*** – Encourage business and industry groups to directly link workforce development and business planning; facilitate workforce planning at the company level, in regions, and among industry sectors; and link this with provincial economic planning. Ensure post-secondary education funding is strategically invested in programs that produce skilled graduates in high demand occupations. Develop a workforce development strategic plan that links economic planning with (and) integrates labour market development, post-secondary education and training, the ITA, and private sector human resource development. Within this, develop a Post-Secondary Education Strategic Plan that is integrated with the other planning.
6. ***Use benchmarking, performance measurement and program evaluation to develop or amend policies and programs*** – Work with the BC Progress Board, the ITA and others to develop specific workforce development benchmarking measures and indicators that go beyond the very broad ones already in place. Inculcate a culture of on-going program performance measurement, evaluation and reporting for workforce development programs; use this as a basis for policy and program decision-making and allocation of public funds.
7. ***Develop and use a coherent framework for financing workforce development that is consistently applied and emphasizes efficiency*** – Develop a clear framework and rationale for funding workforce development and research and consider implementing innovative and effective models for financing it, based on principles such as “those who

benefit, should pay” and “co-financing”. A co-financing approach needs to include employee, student and job-seeker contributions in addition to employer investments. Also, BC Government should evaluate the \$90 million Training Tax Credit Program and consider reprofiling and expanding it, with ITA programs continuing to be eligible. Workforce development need not involve an increase in expenditures, but rather may involve a reallocation within existing budgets. In fact, given the current economic environment, workforce development initiatives will need to become as efficient as possible because of reduced tax revenues and private sector revenues.

8. ***Increase support to maximize the utilization of talent among existing workers and unemployed persons*** – Hold a comprehensive consultation process with industry groups and others to develop a “strategic initiatives” fund using LMA monies to test models for increasing the employment of groups under-represented in the BC labour market. This needs to be guided by a strategic framework that is coherent and informed by industry and under-represented group stakeholders; and it needs to directly influence the next round of LMA allocations to provincial ministries and third parties.
9. ***Anticipate and prepare programming for workforce transition and re-employment*** – While this is very important for the next year or two, because of the increasing globalization, integration, technological change in our economy, this will be increasingly important in throughout the coming decade. There are several things to consider with such programs:
  - What can we learn from previous economic downturns in the 80s and 90s, and how did past labour adjustment programs work; what did we learn?
  - Do the principles for economic and labour adjustment developed for the Canada-US Free Trade and the North American Free Trade Agreements apply to this current economic downturn? For example, should assistance only be directed to workers and not to companies because of subsidy concerns? What about whole sectors?
  - The federal Industrial Adjustment Services (part of the Labour Market Partnerships Program) is being transferred to the Province under the LMDA. How should this program be used in the future? How is the Community Development Trust funding for forest workers being used, and what can we learn from this? Should it be expanded?
  - Should programs of the past such as Employment Insurance work-sharing (i.e. working less than full-time and topped up with EI benefits) be re-introduced?
  - How can transition programming be designed to reach small business employees?
  - Are there opportunities to move displaced workers into ITA training programs?
  - Industries such as mining and oil and gas (e.g. see [www.petrohrsc.ca](http://www.petrohrsc.ca)) are starting to look at re-employment or transition strategies to recruit workers from other industries. What should government’s role be in facilitating such transition?
  - To the extent the BC Government others develop transition programming, it should consider a quick response capacity, flexibility, early-warning/intelligence systems, re-employment mechanisms, innovative pension and other income support provisions.

10. ***Develop and make accessible a comprehensive labour market information program to support decision-making and resource allocation*** – We need more up to date, accessible/useable, reliable, disaggregated (i.e. by region, industry, occupation, year) labour market data and occupational projections for use by policy makers, program managers, employers, industry associations, workers, job-seekers, students, community groups, etc. Alberta provides a good model with its capacity in providing a number of labour market information tools, but BC’s approach needs to be based on “made-in-BC” realities models.

Immediate actions should include enlisting the advice of the new Provincial Economic Advisory Council, chaired by David Emerson, to make suggestions on workforce development priorities and strategies.

#### **6.4 Conclusion and Recommendations**

In the recent past, BC post-secondary vocational and technical education, industry training, labour market development, and employer-based HRD programs have expanded in response to economic and employment growth. Many best practices and innovative initiatives have emerged, however, important gaps were identified in this paper in each category of workforce development programs in BC.

BC workforce development systems appear to have improved and be on the right track. However, many of the indicators of success for such programs are not outcomes, but rather inputs, processes, and direct outputs of education, training, employment, labour market and HR programs. Do these programs ultimately create comparative advantages necessary for a competitive and vibrant labour market and adaptable workforce? Do they go beyond “means” to achieve the necessary outcomes of improved competitiveness, productivity growth, labour market flexibility, and adaptation to change and transition?

As a jurisdiction and economy, BC and its citizens are well-positioned to benefit from and maximize economic growth in the long-term. This context includes many positive features of workforce development. Notwithstanding identified shortcomings and suggestions for change in existing BC workforce development policies and programs, there is no reason that existing and future resources – if used strategically and evidence-based – can go far in developing a highly skilled, high-performance workforce for our province.

A workforce development strategy will not work if it is led solely by the BC Government. With appropriate public policy climate-setting and facilitation and progressive reform in national policies, industry groups, employers, workers, labour groups, educators and community leaders can work together to achieve this vision. The workforce development status quo will not be enough to achieve the vision provided in this paper. More strategic and innovative measures are needed to achieve the necessary labour market and economic outcomes such as labour market flexibility, workforce adaptability, productivity improvements, and international competitiveness.

## **Recommendations**

1. Provincial and federal workforce development programming and funding should be focused on long-term workforce and economic requirements and be expanded, not reduced in the short-term.
2. All workforce development programming should reflect an evaluation framework – whether similar or not to the framework recommended in this paper – that focuses on important measurable workforce, labour market and economic “outcomes.”
3. The provincial government should develop a comprehensive worker adjustment strategy that integrates LMA, Community Development Trust and other programs and funding to address displaced, at-risk and vulnerable workers in hardest hit industries and regions throughout the province to facilitate retention of employment and re-employment.
4. For the longer term, economic planning and policies and supporting workforce development policies need to reflect the new economy and knowledge-based and emerging growth industries in BC.

While policy-makers and stakeholders are obviously focused on the current economic slowdown and its impacts, we must keep our eyes on the medium term – as our economy starts to gather momentum – and the longer term. In a recent editorial on the “jobs crisis”, *The Economist* says:

“Over the next couple of years, politicians will have to perform a difficult policy U-turn; for, in the long term, they need flexible labour markets...The euphemism for that is ‘flexibility.’ The bare truth is that the more easily jobs can be destroyed, the more easily new ones can be created. The programmes that help today, by keeping people in old jobs will tomorrow become a drag on keeping the great adjustment that lies ahead. As time goes by, spending on keeping people in old jobs will need to be cut, and replaced with spending on training them for new ones. Governments will have to switch from policies to support demand to policies to make their labour markets more flexible. That is going to require fancy footwork; but politicians will have to perform those steps, because if they fail to, they will stifle growth” (*The Economist*, March 14, 2009, p. 11).

## **REFERENCES**

- Alberta Apprenticeship and Industry Training Board. Annual Report 2007/08. Alberta Advanced Education and Technology: Edmonton. 2008.
- Arsenault, Jean-Francois. "Importance of Productivity." Presentation at Sixth National Labour Market Information Forum, Fredericton, New Brunswick, October 20-22, 2008.
- Applied Science Technologists and Technicians of British Columbia. Roundtable on Technology Skills Shortage II. ASTTBC: Surrey, BC. 2007.
- Auditor General of British Columbia. A Major Renovation: Trades Training in British Columbia. Legislative Assembly of BC: Victoria. November 2008.
- BC Chamber of Commerce and Community Futures Development Association of BC. BC Skills Force North: Final Report. May 2006a.
- BC Chamber of Commerce. Survey Results: Hiring People with Disabilities. 2006b.
- BC Chamber of Commerce. Closing BC Skills Gaps 2008: The Economic Imperative of Addressing Skills Shortages and Wastage in British Columbia. BC Chamber: Vancouver, BC. January 2008.
- BC Competition Council. Report of the BC Competition Council: Enhancing the Competitiveness of British Columbia. June 2006.
- BC Progress Board. Sixth Annual Benchmarking Report, December 15, 2006.
- BC Progress Board. Seventh Annual Benchmarking Report. December 13, 2007.
- BC Stats. "Labour productivity: BC's Achilles heel?" Infoline Report, Issue 08-06. 2006.
- BC Stats. "Small business in BC Continues to prosper." Infoline Report. Victoria, BC. Issue 08-10, November 29, 2008.
- BC Stats. Labour Force Survey Tables: November 2008 Labour Force Survey. December 2008.
- BC Stats. Labour Force Survey Tables: July 2009 Labour Force Survey. August 2009.
- Benimadhu, Prem. "Startling Business Shifts Causing a Rethink of Work." Inside Edge, Summer 2008. The Conference Board of Canada: Ottawa. Summer 2008.
- Bloom, Michael and Michael Grant. Brain Gain: The Economic Benefits of Recognizing Learning Credentials in Canada. Conference Board of Canada: Ottawa. 2001.
- Brisbois, Richard and Larry Orton and Ron Saunders. Connecting Supply and Demand in Canada's Youth Labour Market. Canadian Policy Research Networks: Ottawa. April 2008.

Brisbois, Richard, N. Pollack and R. Saunders. Lessons from Other Countries Regarding Incentives for Employer-Sponsored Training. Canadian Policy Research Network: Ottawa. March 2009.

Brzustowski, Tom. "Where is Canada's advantage?" Financial Post, October 24, 2008.

Business Council of BC. "Where will the workers come from? The implications of slower labour force growth." Policy Perspectives, Vol. 13, No. 1, February 2006.

Business Council of BC. Labour Market Needs, Immigration Programs, Foreign Credential Recognition and Employment: LIFE in Ireland, New Zealand, Australia and Canada. BCBC: Vancouver, BC. March 2007.

Canadian Council on Learning. Connecting the Dots: Linking Training Investment to Business Outcomes and the Economy. CCL: Ottawa. April 2007.

Canadian Council on Learning. Unlocking Canada's Potential: The State of Workplace and Adult Learning in Canada. CCL: Ottawa. June 2007.

Canadian Council on Learning. "Strong post-secondary education sector key to Canada's future prosperity, business leaders say." News Release, CCL. February 18, 2009.

Canadian Council on Learning. Post-Secondary Education in Canada: Meeting our Needs? 2008-2009. Ottawa: CCL. 2009.

Canadian Federation of Independent Business. Training Incentives: The Small Business Perspective. CFIB BC and Yukon: Vancouver. September 18, 2006.

Canadian Federation of Independent Business. Help Wanted : Labour shortage troubles deepen for SMEs in 2007. CFIB: Ottawa. March 2008.

Canadian Learning Council, State of Learning in Canada: Toward a Learning Future, 2008. Canadian Learning Council: Ottawa, 2008.

Coalition of BC Businesses. Labour Supply Strategies for Small Businesses in British Columbia: Recommendations to the Government of British Columbia and Other Stakeholders. May 2007.

Competition Policy Review Team. Compete to Win: Final Report. Government of Canada: Ottawa. June 2008.

Conference Board of Canada. The Future of Work: Confronting BC's Labour Shortage. Conference Board of Canada: Ottawa. June 2008.

Conference Board of Canada. How Canada Performs: A Report Card on Canada. Conference Board of Canada: Ottawa. November 2008.

Davis, Andrea. "Phased retirement to become more common." Benefit News. November 25, 2008.

Dawe, Susan and Nhi Nguyen. Education and Training that Meets the Needs of Small Businesses: A Systematic Review of Research. National Centre for Vocational Education Research: Adelaide, Australia. 2007.

Department of Labour and Industry Training Federation. The Skills-Productivity Nexus: Connecting Industry Training and Business Performance. Department of Labour: Wellington, New Zealand. April 2008.

Desjardins Group. "42 per cent of Canadians over 40 considering deferring retirement by nearly 6 years." Survey Results. November 20, 2008." <http://www.desjardins.com/en/accueil.jsp>.

European Centre for the Development of Vocational Training. Zooming in on 2010: Reassessing vocational education and training. CEDEFOP: Luxembourg. 2007.

European Centre for the Development of Vocational Training. The Shift to Learning Outcomes: Conceptual, Political and Practical Developments in Europe. CEDEFOP: Luxembourg. 2008a.

European Centre for the Development of Vocational Training. Future Skill Needs in Europe – Focus on 2020. CEDEFOP: Luxembourg. 2008b.

European Centre for the Development of Vocational Training. Assuring the Quality of VET Systems by Defining Expected Outcomes: A Cross-Country Analysis of Seven Member States. CEDEFOP: Luxembourg. 2008c.

European Centre for the Development of Vocational Training. European Qualifications Framework: Mutual trust is necessary for worker and learner mobility. News Release. November 2008a.

European Centre for the Development of Vocational Training. "Will you still need me when I'm 64? Training and demographic change: The decline in vocational education and training students and graduates." CEDEFOP Briefing Note, November 2008b.

European Centre for the Development of Vocational Training. November 13, 2008 media release

European Centre for the Development of Vocational Training. "In the finishing straight: From Copenhagen to Bordeaux, CEDEFOP's progress analysis (main findings)." PowerPoint Presentation. CEDEFOP. December 2, 2008.

European Commission. Jobs and Growth in the EU: A Roadmap to a Sustainable Tomorrow. July 2008.

Freud, David. Reducing Dependency, Increasing Opportunity: Options for the Future of Welfare to Work – An Independent Report to the Department for Work and Pensions. Department for Work and Pensions: Leeds, UK. 2007.

Goldenberg, Mark. Employer Investment in Workplace Learning in Canada. Canadian Policy Research Networks: Ottawa. 2006.

Government of Alberta. Building and Educating Tomorrow's Workforce: Alberta's 10 Year Strategy. 2007.

Governments of Alberta and British Columbia. Trade, Investment and Labour Mobility Agreement Between British Columbia and Alberta. April 2006.

Government of Canada. Canada's Economic Action Plan: Action to Help Canadians and Stimulate Spending. Ottawa. February 2009.

Hirsch, Todd. More Than Just Lucky Shamrocks: The Re-Invention of Ireland and Lessons for Western Canada. Canada West Foundation: Calgary. November 2008.

Industry Training Authority. ITA PLAR/FCR/Assessment Research Project. ITA: Richmond, BC. December 31, 2007.

Industry Training Authority. ITA Annual Service Plan 2008/09. ITA: Richmond, BC. 2009.

Irish Department of Enterprise Trade and Employment. Tomorrow's Skills: Towards a National Skills Strategy: 5<sup>th</sup> Report Expert Group on Future Skills Needs. IDETE. 2007.

Irish National Training and Employment Authority. The Irish Labour Market Review, 2007: A FÁS Review of Irish Labour Market Trends and Policies. INTEA. 2007.

Manpower Inc. Annual Talent Shortage Survey 2008. Manpower Inc.: Milwaukee. 2008.

McNiven, J.D. and M. Foster. The Developing Workforce Problem: Confronting Canadian Labour Shortages in the Coming Decades. Atlantic Institute for Market Studies: Halifax. December 2008.

McKinsey Global Institute. Changing the Fortunes of America's Workforce: A Human Capital Challenge. MGI: Washington, D.C. June 2009.

Mead, Walter R. God and Gold: Britain, America and the Making of the Modern World. Knopf: New York. October 2007.

Ménard Marinka, Cindy Chan and Merv Walker. National Apprenticeship Survey: Canada Overview Report 2007. Statistics Canada: Ottawa. 2008a.

Ménard Marinka, Cindy Chan and Merv Walker. National Apprenticeship Survey: British Columbia Overview Report 2007. Statistics Canada: Ottawa. 2008b.

Ministry of Advanced Education. "International Literacy and Skills Survey Results." News Release. Government of BC: Victoria. November 9, 2005.

Ministry of Advanced Education, BC Stats, and Outcomes Working Group. 2007 Apprenticeship Survey: Summary Report. Government of BC: Victoria. 2007.

Ministry of Advanced Education and Labour Market Development. “The facts about post-secondary education in BC.” Ministry Fact Sheet, Government of BC: Victoria. August 20, 2008.

Ministry of Advanced Education and Labour Market Development. Look Forward: Workforce of the Future Forum (Concurrent Breakout Session Report). Government of BC: Victoria. July 2008.

Ministry of Advanced Education and Labour Market Development. Annual Service Plan: 2009/10-2011/12. February 2009.

Ministry of Advanced Education and Labour Market Development. Ten-Year Employment Outlook for BC, COPS BC Unique Scenario, 2007-2017. Government of BC: Victoria. 2009.

Ministry of Community, Aboriginal and Women’s Services and Citizenship and Immigration Canada. “Canada-BC Immigration Cooperation Agreement.” Joint Backgrounder, April 6, 2004.

Ministry of Economic Development. WorkBC: An Action Plan to Address Skills Shortages in BC. Government of BC: Victoria. 2007.

Ministry of Economic Development. WorkBC: Labour Market Agreement BC: 2008/09 Annual Plan. Government of BC: Victoria. 2008.

Ministry of Economic Development. “WorkBC Achievements Across Five Strategic Areas.” Ministry Backgrounder. Government of BC: Victoria. May 2, 2008.

Ministry of Economic Development. WorkBC: An Action Plan to Address Skills Shortages in BC – A Year in Review. Government of BC: Victoria. June 2008.

Ministry of Education. Annual Service Plan: 2007/08-2009/10. Government of BC: Victoria. 2008.

Ministry of Education. Annual Service Plan: 2009/10-2011/12. Government of BC: Victoria. February 2009.

Ministry of Finance. Training Tax Credits Discussion Paper. Government of BC: Victoria. July 2006.

Ministry of Finance. “Slower growth projected by Economic Forecast Council.” News Release, Government of BC: Victoria. December 5, 2008.

Ministry of Finance. “Economic Forecast Council Lowers BC Forecast for 2009.” News Release. Government of BC: Victoria. February 2, 2009.

Ministry of Housing and Social Development. BC Employment and Assistance Summary Report. Government of BC: Victoria. June 2009.

Ministry of Technology, Trade and Economic Development. “Agreement extends full labour mobility across Canada.” News Release. Government of BC: Victoria. December 5, 2008.

- Mustel Group Market Research. 2007 Skilled Trades Survey: Perceptions Among BC Youth. March 2007.
- OECD. PISA 2006: Science Competencies for Tomorrow's World. OECD: Paris. 2007a.
- OECD. OECD Employment Outlook 2007. OECD: Paris. 2007b.
- OECD. Globalization, Jobs and Wages: Policy Brief. OECD: Paris. June 2007.
- OECD. Trends Shaping Education, 2008 Edition. Centre for Educational Research and Innovation. Paris: OECD, 2008.
- PLA Centre. Achieving Our Potential: An Action Plan for Prior Learning Assessment and Recognition (PLAR) in Canada.
- Petroleum Human Resources Council of Canada. "Labour Market Transition Service." PHRCC website, <http://petrohrsc.ca/english/projects/lmt/index.cfm?zbrandid=4107&zi...>
- Plant, Geoff, QC. Campus 2020 – Think Ahead: The Report, Access and Excellence: The Campus 2020 Plan for British Columbia's Post-Secondary Education System. April 2007.
- Private Career Training Institutions Agency of BC. Annual Report 2007/08. PCTIA: Burnaby, BC. 2008.
- Proudfoot Consulting Company. Global Productivity Report 2008. Proudfoot Consulting: Atlanta, Georgia. 2008
- Public/Private Ventures. Targetting Industries, Training Workers and Improving Opportunities: The Final Report from the Sectoral Employment Initiative. 2008.
- Ramlo, Andrew. Changing People, Changing Places: Implications of Demographic and Economic Change for BC's Post-Secondary Sector. Prepared for Campus 2020. Urban Futures Institute: Vancouver, BC. 2006.
- Resource Planning Group Inc. Ministry of Advanced Education and Ministry of Economic Development: Capacity Reviews for Trades Training in BC. August 7, 2007, p. i.
- Rubenson, Kjell and Hans Schuetze. Options for Financing Work-Based Education and Training. Centre for Policy Studies in Higher Education, UBC. 2000.
- Rubenson, Kjell and Richard Desjardins and Ee-Seul Yoon. International Adult Literacy Survey – Adult Learning in Canada: A Comparative Perspective. Ottawa: Statistics Canada. 2007.
- Ryan, Dr. Rose. Why Workplaces Matter: The Role of Workplace Practices in Economic Transformation. Department of Labour, New Zealand. 2008.
- Saunders, Ron. Pathways for Youth to the Labour Market: A Synthesis Report. Canadian Policy Research Networks: Ottawa. September 2008.

Saunders, Ron. Fostering Employer Investment in Workplace Learning: Report on a Series of Regional Roundtables. Canadian Council on Learning: Ottawa. April 2009.

Sharpe, Andrew and Jean-Francois Arsenault. “New Estimates of Multifactor Productivity Growth for the Canadian Provinces.” International Productivity Monitor, Number 18, Spring 2009, pp. 25-37.

Small Business Roundtable. Third Annual Report to Government. October 2008.

Statistics Canada. CANSIM Tables 282-0002 and 282-0087. 2008.

TD Bank Financial Group. Literacy Matters: A Call for Action. 2007.

Taylor, Andrew (Ministry of Economic Development), Robert Mattioli (Service Canada), Jennifer Purcell (Ministry of Advanced Education), Rodney Smelser (Service Canada) and Peter Babstock (Ministry of Employment and Income Assistance). 2008-09 Canada-BC Labour Market Development Agreement, PowerPoint Slides. January 2008.

The Council of the Federation. Competing for Tomorrow: A Strategy for Postsecondary Education and Skills Training in Canada. April 2006.

The Economist. “The jobs crisis”. p. 11, March 14, 2009.

Urban Futures Institute. A Perfect Storm: Sustaining Canada’s Economy During Our Next Demographic Transformation. Urban Futures Institute: Vancouver, BC. 2006.

Usher, Alex and Dunn, Ryan. On the Brink: How the Recession of 2009 will Affect Post-Secondary Education. Toronto: Educational Policy Institute. February 2009.

Watson, John. Private Career Training Institutions Act Review. January 10, 2007.

World Economic Forum. The Global Competitiveness Report 2008-2009. World Economic Forum: Davos. 2008.