



# THE SCHOOL OF PUBLIC POLICY

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## MASTER OF PUBLIC POLICY CAPSTONE PROJECT

**A Framework for Action: Addressing Skills Shortages in British Columbia**

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# THE SCHOOL OF PUBLIC POLICY

## Capstone Executive Summary

British Columbia's economy is at risk of a shortfall in future economic production due to increasing skills gaps and mismatches. The fact that the province faces this growing problem is evidence of a historical lack of policy directed toward providing the workforce with proper skills training. Now is the time for the government, private enterprise and post-secondary institutions to band together to help solve this encroaching issue. If a concerted effort does not take place, British Columbia's economy will be more reliant on the Temporary Foreign Worker Program, which will diminish opportunities for citizens residing in this province. Stakeholders must work toward building the economy internally and providing students with the skills that will help them become economically competitive.

The research presented in this analysis shows that certain sectors in British Columbia face looming skills shortages that will continue to widen in the future. The provincial government's *Labour Market Outlook 2012-2022* argues that firms will need to fill up to one million job openings over the course of this decade. Despite the fact that the province has one of the highest post-secondary educated workforces in the country, people are finding it difficult to translate education to employment. The qualitative research methodology that is utilized for this analysis also explores relevant literature on the steps that other jurisdictions have taken to deal with similar issues in productivity, and the benefits of experiential learning.

The analysis recommends a set of policy proposals that should be utilized by stakeholders in the province to help ensure that British Columbians are receiving the training they need to be globally competitive. This includes reform of the education system, with a broader focus on properly skilling and placing students with economically competitive jobs. The project calls for the implementation of an expert working group to better assess labour market strengths and weaknesses as well as explore policy alternatives, the adoption of the sponsor-a-school policy to help facilitate more experiential learning opportunities for students enrolled in post-secondary institutions, and the establishment of a skills coordinator office that will serve as a quality assurance mechanism. The funding for these policies will require a redirection in the education and training spending that the province currently distributes each year. These targets are feasible, but it will take a strong coordinated effort to dedicate the time and resources that are necessary for success.

The provincial government has already undertaken its effort to market the *Jobs Blueprint*, which has been an accepted economic stimulus effort to reform the province's education and training structure. The policies set out in this analysis will strengthen the blueprint and be marketed as support for the future economic prosperity of British Columbia. Change is necessary; change is essential; and change is what these policies will accomplish.

## **1. Introduction**

British Columbia faces looming skills shortages that could negatively affect the productivity of the economy. Reliance on the Temporary Foreign Worker Program has become a necessity, as sectors of the province are unable to fill employment positions with skilled workers. The problem is exacerbated by the province's weak track record for providing its citizens with the proper skills training they need to be economically competitive. If the province is unable to fill a majority of these positions internally, it will be forced to continue looking elsewhere for skilled workers, which is problematic for long-term residents who have trouble matching their skills with relevant job opportunities.

The ability to produce talented workers to help drive the economy toward future prosperity is essential to the economic success of British Columbia. Globalization has ushered in a new era of development, which author Kerry Jochen calls "talentism". This is the notion that capital flows follow talent flows, and centers of economic power converge on areas where there is globally competitive talent.<sup>1</sup> The free flowing nature of globalization allows workers to apply their skills wherever there is demand, ushering in an unprecedented dispersion of global talent that the world has never witnessed before. In order to remain competitive and strengthen the economy organically, it is imperative that the province of British Columbia is able to foster that growth with its own skilled labour force. The pool of talent is available to the province, but it requires the right policies to help guide individuals toward future economic power. Competing on a global

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<sup>1</sup> Kerry Jochen, "'Talentism,' Mobility and Migration: Implications for BC's Labour Market," *Human*

stage is the impetus the province needs to build this labour force if it wishes to stand a chance at winning the “talent game” and ensuring future prosperity.<sup>2</sup>

This project analyzes the current situation in British Columbia with regards to skills mismatches and shortages. It begins with a literature review of existing publications on this issue, which is complemented by an analysis of the way in which other jurisdictions have solved their own skills shortages. The paper then offers a detailed list of policy proposals, which includes feasibility and funding targets that government, businesses, and post-secondary education (PSE) institutions should implement to support future economic growth. In order to take a critical approach to this argument the paper also includes a concluding section on obstacles to implementation.

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<sup>2</sup> Ibid.

## **2. Methodology**

The methodology used in this report is a qualitative data analysis of the relevant literature concerning skills shortages in British Columbia. This takes a full-scale approach through the collection of government and private publications to arrive at an informative understanding of the skills gap issue. When conducting an analysis on labour market strengths and weaknesses, it is important to obtain information from a number of different actors working within the economy. Due to the wealth of information on skills shortages, there was no need to conduct statistical analysis outside of the currently published works.

The information gathering in the private sector for this analysis is focused on the Conference Board of Canada's informative survey on skills shortages in the province. The Conference Board of Canada's survey is given special attention as its results differ from the work done by the provincial government. As noted in the literature review, the Conference Board conducted a survey of 854 B.C. employers covering over 130,000 employees, which equates to 9 per cent of the provinces' workforce. The survey that was conducted engages a diverse range of employers across all sectors. The questionnaire allowed employers to voice their opinions on the skills shortages that they currently face and other issues involved with seeking help to address these gaps. Another positive feature of the work published here was the ability to look beyond a trade's specific focus for addressing skills shortages. This has not been done by the provincial government's publications. The survey shows that a number of businesses outside of the trades industry require skilled workers to fill current and future positions.

A theme that is evident throughout all of the publications that are presented in this research is that various sectors in the province face skills shortages in the present and future terms. The research design seeks to understand why this is the case, what is being done to address these issues by government, and the role of other important stakeholders in this process. The research that is compiled here takes a critical analysis of the PSE system in the province and ways in which it could be strengthened to better prepare students for the work force. The benefit of using qualitative research to complete this project is that it allows for an objective approach to analyze different policies. The information gathered is more concerned with laying a framework of understanding for what is possible.

The report uses the German and Irish systems as examples of successful economic expansion programs that have placed students with experience related training to supplement their PSE degrees. This takes a qualitative approach to the information available on the work done by these countries and the assessment of their respective successes.

The report could benefit from conducting a thorough labour market assessment, such as that found with the Conference Board of Canada's publication. A survey such as this would engage a variety of stakeholders within the economy to come to a comprehensive labour market information data set. Given the scope of this project it is unfeasible to expect a survey like this to occur. However, the more publications that produce labour market information are a benefit to the province, which is in need of this type of comprehensive data collection.



### **3. Literature Review**

#### **3.1. Skills Shortages**

Unlike the province of Alberta, B.C. has a highly dynamic work force with a number of diverse sectors supported by its geographical position with its port cities to the eastern markets of Japan and China. The province is currently in negotiations for establishing a number of major liquefied natural gas (LNG) projects over the course of the next decade, which will position it as a global leader in the production of LNG.<sup>3</sup>

The LNG proposals will provide a significant amount of capital moving into the province, to go along with a massive job creation that will require skilled workers to be successful. If five of the twelve LNG projects that are proposed move forward there will be at least 63,000 jobs created for construction (half of which will require some form of trades certification), and an additional 64,000 for ongoing operations and maintenance.<sup>4</sup> This will place the province on the fast track for economic success if it is able to fill the positions that are required.

British Columbia's labour situation poses an interesting challenge to policy makers due to the looming skills shortages that the province faces, which is a growing trend across the country. What makes the situation in B.C. unique is the high level of Post Secondary Education (PSE) graduates (63% of the population), and a low unemployment rate at 5.5%, which is below the national average of 6.7%.<sup>5</sup> Scholars view a low

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<sup>3</sup> Michael Burt, "BC Must Act Quickly to Profit from LNG Exports," *The Province*, April, 24 2014.

<sup>4</sup> Petroleum Human Resources Council of Canada, *B.C. Natural Gas Workforce Strategy and Action Plan*, B.C. Natural Gas Workforce Strategy Committee (2013): 6-7.

<sup>5</sup> Daniel Munro, "Skills for Success: Occupations, Credentials and Skills for a Prosperous British Columbia" (Webinar), *Conference Board of Canada* (2014): 19.

unemployment rate as an indication of existing or emerging skills challenges.<sup>6</sup>

Employers in regions and sectors with low unemployment rates are likely facing greater difficulty finding skilled workers.

It is important to distinguish between labour shortages and skills shortages, as the province does not face an immediate issue with a lack of citizens to fill positions. With future economic expansion there will be a need to recruit more talent globally, but due to the existing talent pool there are enough workers coming into the workforce (an estimated 760,000 by 2022) that will be able to make up the majority of required positions.<sup>7</sup> The fact that there is an available source of human capital points towards a troubling trend of skills mismatches in the province, as a large portion of the population does have some form of PSE, yet firms across a variety of sectors report current and future skills shortages.<sup>8</sup>

This issue raises a significant problem for the future of skills employment in British Columbia, as the *Labour Market Outlook to 2022* predicts one million job openings over the span of the next seven years.<sup>9</sup> The *Labour Market Outlook* projects that this will require 78% of the province's workforce to have some form of PSE, which is a 15% gap with the current rate of 63%. More important is the fact that this high percentage will need to be educated with specific degrees that are in high demand as

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<sup>6</sup> Ibid., 17.

<sup>7</sup> Jothen, "Talentism", 4.

<sup>8</sup> British Columbia Provincial Government, *B.C.'s Skills for Jobs Blueprint: Re-Engineering Education and Training*, WorkBC (Victoria: 2014): 4.

<sup>9</sup> Ministry of Jobs, Tourism, and Labour BC, *British Columbia 2022 Labour Market Outlook*, WorkBC (2012): 3.

opposed to ‘soft degrees’ that do not prepare students to immediately contribute to the workforce following graduation.

Like many provinces in Canada, British Columbia’s employers face significant barriers for filling essential employment positions. One of the major concerns is the changing demographics as baby boomers, those with significant amounts of experience, are at the age of retirement. Employers report that there is an experience gap for new graduates seeking employment and this is one of the main issues contributing to future skills shortages. This experience gap problem is a growing trend in many sectors. The issue is that students are not graduating with proper skills training to immediately fill these gaps in employment.<sup>10</sup>

The fact that there is not a major imminent labour shortage on the horizon makes the situation puzzling but also tells of a serious problem found throughout the country, that of a lack of relevant skills training in the workforce. Of the OECD countries Canada has the highest percentage of tertiary-educated graduates who earn less than half of the median income.<sup>11</sup> This is a startling indication of over qualification and significant skills mismatches throughout various sectors of the national economy.

Students often have a mistaken belief that obtaining a PSE translates to having the proper skills that are required by employers within the economy. Individuals cannot simply obtain a degree from a PSE institution without any form of workplace training, which leads to the unrealistic expectation of gaining meaningful employment. The rapid pace of technological development in the work place also means that workers must be up

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<sup>10</sup> Jothen, “‘Talentism’”, 4.

<sup>11</sup> James Stuckey and Daniel Munro, *The Cost of Ontario’s Skills Gap*, Conference Board of Canada (Ottawa: 2013): 14.

to date on training and constantly “re-skilled” in order to keep pace with industry changes. Despite the forecast of future shortages over the last five years, learning hours per employee per year have stayed at an average of 28 hours.<sup>12</sup> Skills training requires a coordinated effort from the time an individual obtains an education through schooling and continuing throughout their employment history. Unfortunately for a number of sectors training at all levels in the province has proven to be insufficient.

It is estimated that there are at least 95,000 residents in the province who are overqualified and working in jobs that do not fit their level of education. These skills mismatches have profound effects on the economy and point to a serious gap between what employers are looking for and what citizens have to offer.<sup>13</sup> Both surpluses and underemployment represent a failure to maximize individual skills and education, which results in citizens not receiving the proper salary for the skills they have and firms looking elsewhere to fill the void. The Conference Board of Canada postulates that if citizens’ educational attainment were aligned with proper employment in the province there would be potential to have an additional \$1.2 billion in GDP, \$195 million in federal tax revenue, and \$155 million in provincial tax revenues.<sup>14</sup>

In March of 2015, the Conference Board of Canada published an informative paper on the nature of skills shortages in British Columbia, which includes a survey of 854 businesses across a variety of sectors detailing their concerns about filling employment positions. Their data looked at large and small to medium sized enterprises

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<sup>12</sup> James Stuckey and Daniel Munro, *Skills for Success: Developing Skills for a Prosperous B.C.*, Conference Board of Canada (Ottawa: 2014): 28.

<sup>13</sup> *Ibid.*, 32.

<sup>14</sup> *Ibid.*, 33.

(SMEs), covering over 130,000 employees, which accounts for 9% of the labour force. Due to a lack of significant labour market information from the government of British Columbia, this survey provides an informative look at the problems facing the economy from the view of the employer.<sup>15</sup>

57% of those surveyed stated that they are very concerned with the imminent retirements and the prospect of facing a shortage of experience in the near future. Having the relevant experience to fill these skilled positions has thus become a focal point for future productivity of a number of firms within British Columbia.<sup>16</sup> A staggering 64% of employers expect reduced firm productivity in the near future, and 65% say that current and anticipated skills gaps will reduce the quality of the services and products that they provide.<sup>17</sup>

It is especially important to address these skills and experience gaps in light of the aforementioned rise of LNG production. Australia provides an interesting case of this as the country attempted to begin production of LNG amidst looming skills shortages. The LNG boom was incapable of matching labour with supply, which forced production to cease on a number of new and expanding projects jeopardizing a \$180 billion investment.<sup>18</sup> If B.C. is unable to get a handle on aiding its citizens in obtaining the proper skills training and experience, it will be incapable of handling this type of economic expansion leading to a similar fate of the LNG industry in Australia.

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<sup>15</sup> Ibid., i.

<sup>16</sup> Ibid., 18.

<sup>17</sup> Ibid., 33.

<sup>18</sup> Paul Sonali, "High-Cost Australia May Miss \$180 Billion LNG Expansion Wave," *Reuters* (2014).

The problem is also exacerbated by the lack of initiative shown by employers to provide young employees with co-op positions and skilled on the job training. Nationally, among the 26 OECD countries, Canada ranks 20<sup>th</sup> for job-related education and training.<sup>19</sup> One of the reasons behind this is a fear of poaching. Employers have voiced their concern that if they train young employees they may leave their businesses and gain employment elsewhere. This has led, "... most employers [to rely] on the efforts of individuals to become educated and skilled, and public and private educational training organizations to provide individuals with these skills".<sup>20</sup> This is in addition to previous research that has found that some construction employers prefer to employ a series of apprentices who are cheaper and less informed of their rights than certified trades workers. It is clear that skills' training does not solely fall on the shoulders of government and PSE institutions, but employers also have an essential stake in building the province's workforce.

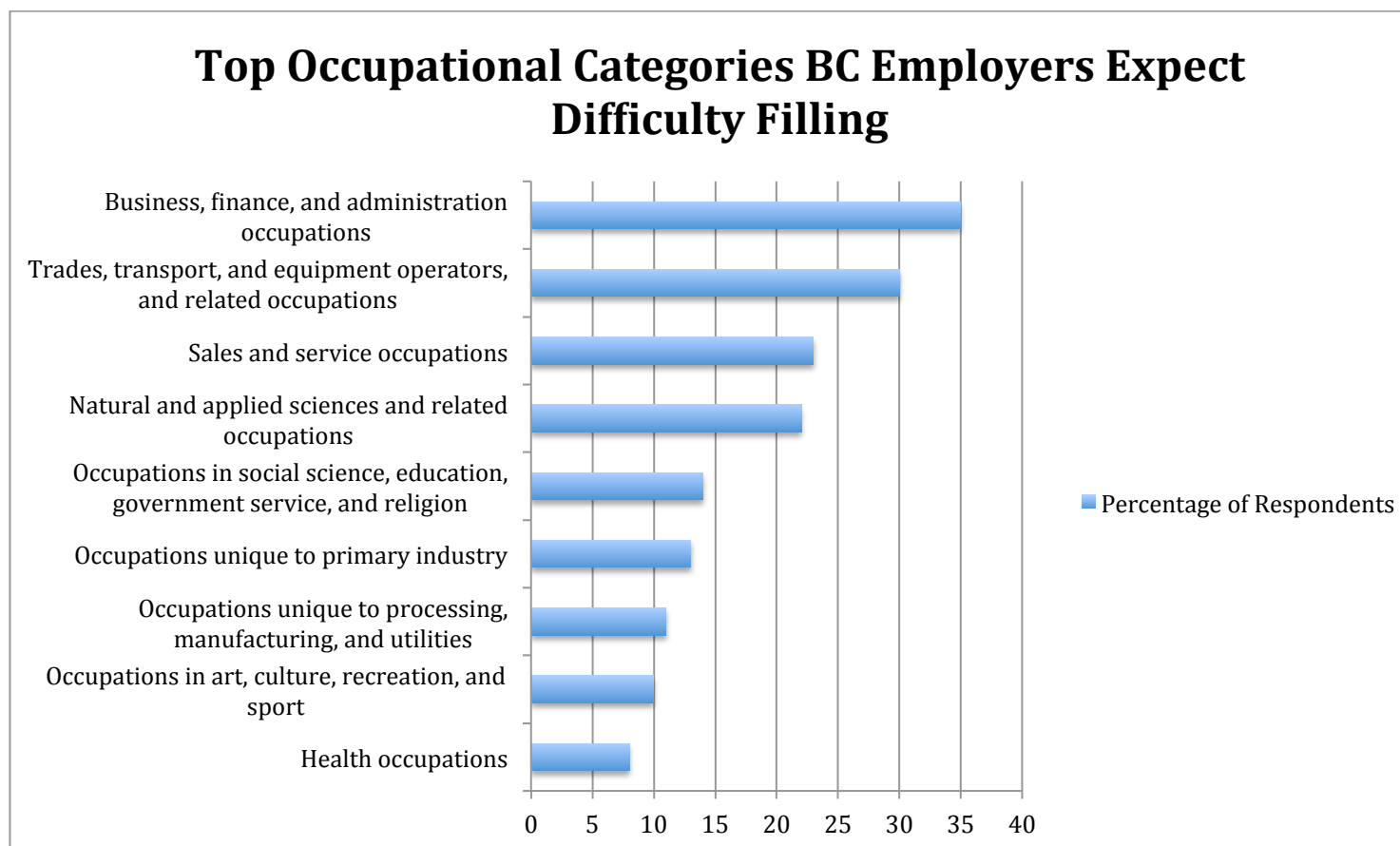
The survey conducted by the Conference Board also sheds light on the specific jobs that employers require in order to meet current and future demand. This includes a large number of trades degrees, as British Columbia has historically lagged behind in producing enough trades diplomas to meet demand. The survey also shows that employers in the province require experienced workers, especially in the field of business management. Skills shortages are therefore not confined to one sector, and must be

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<sup>19</sup> Philip Cross, *Do Labour Shortages Exist in Canada? Reconciling the Views of Employers and Economists*, Fraser Institute, (Vancouver: 2014), 5.

<sup>20</sup> Wolfgang Lehman, Alison Taylor and Laura Wright, *Youth Apprenticeships in Canada: On Their Inferior Status Despite Skilled Labour Shortages*, *Journal of Vocational Education and Training*, (2014), 576.

treated with an all-encompassing approach that crosses a number of different regions and occupations (see table 1.0 below).



(Conference Board of Canada Data)<sup>21</sup>

### **3.2 What BC is Doing**

The *Labour Market Outlook 2012-2022* has given the provincial government the information it needs to take on an active role in addressing skills shortages in the province. As noted previously, the information forecasts the opening of 1 million jobs by 2022 and points to a number of sectors that experience skills shortages.<sup>22</sup> The basic finding of this report is what led the provincial government to release its most ambitious

<sup>21</sup> Munro, “Skills for Success”, 44.

<sup>22</sup> Ministry of Jobs, *British Columbia 2022*, various.

attempt at solving the skills shortage issue. The report was published in 2014 and is called the *BC Skills for Jobs Blueprint: Re-engineering Education and Training*. After years of stasis, and a lack of initiative to address looming skills shortages, this shows a positive step by the government to deal with this important economic issue.

The main message coming out of this report is the need for better labour market information.<sup>23</sup> This is a shift in policy, as historically the government has fallen behind in producing important information on the health of the labour market. Their goal is to consistently publish strong labour market information so that the public stays informed and is able to make adjustments for the future.

The Blueprint's focal point for addressing skills training is industry and trades within the province. Special attention is given to reforming primary education and increasing the recruitment of young students toward trades degrees. This includes building stronger connections between PSE institutions and businesses by reforming education, introducing more hands on training, and hiring ambassadors to promote trades. The report calls for an increase of 25% for trades scholarships.<sup>24</sup> The catalyst for the significant attention given to trades degrees is the rise of LNG development in the province and the outlook for job creation due to this industrial economic development. The province is finally taking a stand to address the issue of trades degree completion, which has been a dark spot of economic development for many years.

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<sup>23</sup> British Columbia, *B.C. Skills for Jobs*, 7.

<sup>24</sup> *Ibid.*, 6.



The government has committed itself to utilizing the over \$7.5 billion per year that is spent on education and training to achieve its economic goals with this plan.<sup>25</sup> This includes \$750 million over the next three years to improve infrastructure and equipment in PSE institutions, as well as \$185 million to support new training infrastructure.<sup>26</sup> Over the span of the 10-year plan this equates to an estimated \$3 billion in redirected funding towards training for in-demand occupations.<sup>27</sup> To oversee these programs and produce broader labour market information, the Blueprint established a Labour Market Priorities Board. Unfortunately there is yet to be an accessible website for this board and there is no published information on the creation or composition of its members.

Another positive response to skills shortages has been the financial support for the *WorkBC.ca* website. This is a user-friendly jobs database that provides relevant occupational information and serves as a guide for students seeking to gain more knowledge of the educational requirements for specific jobs. The site markets the provincial government's goal in emphasizing occupations that require trades' certifications to fill industry needs. In keeping with this theme there is a strong focus on structuring those degrees that will help to build a strong labour force for future LNG projects.<sup>28</sup> The site also contains a jobs board, which isn't solely focused on trades, but has a listing of a wide variety of occupations that prospective employees can research. This has the dual affect of providing employers with an interactive forum to better

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<sup>25</sup> Ibid.

<sup>26</sup> Ibid., 15.

<sup>27</sup> Ibid., 6.

<sup>28</sup> "WorkBC," *Province of British Columbia*, (2015).

connect with future employees and post jobs that are in high demand. The government is committed to an annual fee of \$1 million to help connect job seekers in the workplace.<sup>29</sup>

This move toward establishing stronger networks online and funding for job placement displays a dedication to steering students into areas of education that fill current and future labour market needs. The government has also stated that it will try to implement financial grants and loan forgiveness programs as an incentive to attract students toward industry.<sup>30</sup> This again can be viewed as a move to prepare the workforce for LNG development and the diversification of the economy.

The government has committed to utilizing the aboriginal workforce, which is the fastest growing population in the province. Aboriginal peoples will play an integral role in the future success of the economy. The current secondary completion rate for aboriginals in the province is at 59.6%, which is higher than the national average, but must be improved in order to utilize this important labour resource. Approximately half of the aboriginal population in the province is under the age of 25, so it is imperative that the provincial government do everything in its power to help connect them with PSE degrees and certificates that will fill skills gaps and support communities.<sup>31</sup>

The Ministry of Jobs, Tourism and Skills Training office published its *Final Jobs Report* covering the 2014 fiscal year, which is part of the government's commitment to producing better labour market information. Not surprisingly this report has a sole focus on industry and trades sectors with an examination of the strength of employment and the

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<sup>29</sup> British Columbia, *B.C. Skills for Jobs*, 20.

<sup>30</sup> *Ibid.*, 12.

<sup>31</sup> *Ibid.*, 14.

future needs that must be addressed. This report focuses on seven major industries in the province and finds that in almost every single one there are perceived skills shortages currently and forecasted for the near future. The main sectors are: forestry, mining, LNG, agrifoods, technology, tourism, transportation, and international education.<sup>32</sup> It details the same issues that have been apparent for many years, which include aging demographics, need for more investment and ideas to attract workers (especially in rural areas), as well as competition for labour with the Alberta oil sands.

The emphasis on the promotion of trades degrees is historically important due to the social framing of these occupations that has dominated the public's perceptions. The ethos regarding trades degrees and certifications has predominantly been negative, as students and parents view this form of work merely as a means to an end as opposed to a meaningful occupation.<sup>33</sup> Trades degrees are associated with lower social status mostly due to their labour intensive nature, which gives them the view of a second-best option next to a university degree. Only recently has the status of these occupations risen amongst families, yet children still face a level of marginalization when it comes to choosing this career path over the traditional university degree. A national survey published in 2013 among Canadian youth aged 13-17 found that despite an increase in the number of youths entering trades degrees, some 53% of respondents still identified a university degree as their first choice for a post-secondary education.<sup>34</sup> A college diploma was preferred by a quarter of students, and an apprenticeship program was

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<sup>32</sup> Ministry of Jobs, Tourism and Skills Training, *British Columbia Jobs and Investment Board Final Report*, British Columbia Jobs and Investment Board (2014), ii.

<sup>33</sup> Lehmann, "Youth Apprenticeships", 572.

<sup>34</sup> *Ibid.*, 573.

chosen by less than 20% as their first choice. This is problematic when considering the lucrative nature of many of these trades degrees, as the wage rates are high and there is clearly a high demand within the province. It is important to place a large emphasis on changing the conception of trades degrees, and helping schools and parents realize the economic benefits of having children pursue this form of education. People need to move away from ‘soft’ university degrees, which have held a number of young people back from gaining the skills they need to be effective within the economy.

The *Final Jobs Report* also briefly mentions the failing state of the province’s research and development (R&D), which is a national issue for Canadian universities and businesses. It notes that the government lags behind providing solid strategies for industry growth, and there is a lack of cohesion between what researchers wish to research and the products that businesses need.<sup>35</sup> Although the report does not go into significant detail on the issue, it is a positive step that the government is giving some attention to this problem.

There is a University Industry Liaison Office for the province, but it is clear that it does not have access to the proper support to effectively connect PSE institutions and businesses. The conundrum with this is that many of the university institutions, especially the large ones such as the University of British Columbia, Simon Fraser University etc., have a major focus on R&D, yet they fall behind in producing products to make businesses competitive on the global stage.<sup>36</sup> The way that these PSE institutions are operating with their choice and completion of research projects is an extension of

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<sup>35</sup> Ministry of Jobs, *British Columbia Jobs and Investment*, 30.

<sup>36</sup> Canadian Council on Learning, *Challenges in Canadian Post-Secondary Education*, (Ottawa: 2009), 18.

subjective goals that benefit those involved at the expense of providing society with the tools it needs to be economically competitive.

The increased focus on research and development takes away from individual student experience, as professors are more engaged with their research as opposed to providing an education that will make young people competitive in the workforce. Scholars Ross Finnie and Alex Usher aptly pointed out the fallacy of this when they argued that, “Since institutions consider themselves to be in business precisely to help people learn, it [seems] deeply unfair that quality [is] being judged on measurements which effectively ignore the educational process”.<sup>37</sup> It is disconcerting to think that the academic community has been calling for change for over ten years, yet little has been done to reform the system over that time span. There is a definite lag in providing both relevant education and essential R&D products to help the province gain an edge economically.

Fortunately, the British Columbia Ministry of Advanced Education has taken positive steps for compiling important information to address the quality of PSE degrees, assessing the level of success students have in applying their degrees in the workplace. These assessments allow the government to produce more information on the economic sectors that are facing skills shortages outside of the trades area such as business and technology. This has led to the creation of its *Accountability Framework Standards Manual 2014/15*.<sup>38</sup> This framework utilizes a number of different survey’s information

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<sup>37</sup> Ross Finnie and Alex Usher, *Measuring the Quality of Post-Secondary Education: Concepts, Current Practices and a Strategic Plan*, Canadian Policy Research Networks (Ottawa: 2005), 14.

<sup>38</sup> British Columbia Ministry of Advanced Education, *Performance Measures for British Columbia’s Post-Secondary Education System*, Province of British Columbia (Victoria: 2015).

that includes graduate assessments of their skills development, quality of instruction, satisfaction with education, and the usefulness of their skills knowledge for current employment.<sup>39</sup> The survey data has been gathered and analyzed for the year 2014, and will be published in 2015. Relevant student data will further help to assess high quality learning outcomes, which can be used to reform the current system.

This framework distances itself from the prevailing quality-as-excellence review that is still used in many provinces in Canada. These outdated quality assessments for students include analyzing GPA attainment, research funding, and research inputs. However, with the addition of greater student engagement, it also provides an analysis of relevant labour market information and unemployment rates in high demand sectors.<sup>40</sup> All of the information gathered will hopefully lead the government, PSE institutions, and policy makers to better align students with occupations following graduation.

The report also points out the need for employees in British Columbia to receive constant education and training to help them stay competitive within the workforce. It notes that employers need to be better engaged with this process, and more funding has to be committed to help re-skill workers to better adapt to changing technological innovations.<sup>41</sup>

As a whole the report does a great job of addressing the shortfalls of those industries that were researched, and publishes some key steps that the government must take in addressing the skills issue. The report would have benefitted with better

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<sup>39</sup> Ibid., 4.

<sup>40</sup> Canadian Council on Learning, “Challenges In”, 19.

<sup>41</sup> Ministry of Jobs, *British Columbia Jobs and Investment*, 33.

engagement of SME's, and a variety of partners that are not high-level executives and industry leaders. One quick look at the reference list shows that it is very much a top-down approach. Strength is derived from engaging all those involved within industry, rather than solely from the mouths of the executives. This is why the Conference Board of Canada's survey is so important because it successfully surveys a wide variety of businesses and employees from across all sectors, which include industry leaders and SME's. Emphasizing the support for trades is extremely important for strengthening the economy, but there are a number of institutions looking for management and experience positions, which must garner appropriate attention within these kinds of reports published by the government.

### **3.3 Shape of PSE Institutions**

British Columbia prides itself on having a strong system of PSE institutions that are globally competitive. This is led by the University of British Columbia which ranks as the number two institution in Canada, and number forty of the top 500 world ranking institutions in 2013 according to McLean's Magazine.<sup>42</sup> Universities in the province have worked hard to attract students from around the world to help build this globally competitive system. These institutions have been successful at challenging students to learn concepts and gain theoretical information, as evidenced by the high rate of annual university enrollment.<sup>43</sup> However, the presence of skills shortages in a number of sectors

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<sup>42</sup> Josh Deehas, "23 Canadian Universities Make Global Top 500 List," *MacLean's Magazine* (August 15, 2013).

<sup>43</sup> Ministry of Advanced Education, *Post-Secondary Central Data Warehouse Standards Report*, Province of British Columbia (Victoria: 2014), 3.

is evidence that these PSE institutions are not providing students with the proper support and training to make them competitive in the labour force.

This gap in experience training is most prominent at universities that offer a wide variety of bachelor degrees, from political science to business management. The prevailing method of teaching is to transmit information to students with little engagement or practical application. “Many programs in higher education are much more focused on impressing information on the mind of the learner than on opportunities for the learners to express and test in action what they have learned”.<sup>44</sup> The statistics noted previously on skills mismatches in the province is telling of the issues that students face upon graduation. Better information and teaching practices are needed to help reform and build a stronger, and more economically competitive system. It is unacceptable that students have to pay such large sums for these educations, while their prospects for future employment is left in doubt.

The core issue lies within the way students are taught, and how society views those with university degrees as having higher standing as opposed to other forms of PSE. Due to the high rates of enrolment at universities it is clear that institutions are benefiting from a huge resource in students seeking to obtain these sought after certifications. As noted in the previous section, there is a gap in those who wish to obtain college diplomas and trades certifications based on the historical significance of having a university degree. This has allowed professors to engage in their preferred methods of lecturing and research, as there is no shortage in supply of students applying to these institutions.

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<sup>44</sup> Alice Kolb and David Kolb, “Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education,” *Academy of Management* (June 2005), 208.



There have not been any major changes to the way students are taught in universities and this stasis is exacerbated by the increased focus on R&D for many professors. The focal point of lecturing in many degrees is structured by the mental aspect in terms of theoretical learning, rather than applying that knowledge in a workplace setting and learning from experience. This follows the preferred method of testing and final exams, which require a student to regurgitate information without meaningful application. Certain academic degrees will never have active learning components due to their academic nature, yet those same methods are being employed in the realm of professional degrees that are meant to give students a foot in the door for jobs following undergraduate completion. Lecturing by way of disseminating information perpetuates the hierarchical ordering of the teacher and student relationship. This is a disconnected way to enhance a person's knowledge, especially when so many students graduate with a lack of relevant experience. Rather than 'talking at' students, it is more beneficial to have them be challenged and learn in an active way.<sup>45</sup>

Many introductory courses at large universities have a huge number of students who attend these lectures. It is simply not possible to incorporate active learning techniques within these environments, but they are possible for smaller upper class sizes that are course requirements for professional degrees.

Not all degrees in British Columbia's universities are devoid of hands on training and experience. The requirements for Engineering and Nursing for instance, contain co-op and relevant on the job training. These two forms of education serve as good models of experiential learning built into the curriculum that other degrees should strive for.

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<sup>45</sup> Stephen Billet, "The Standing of Vocational Education: Sources of its Societal Esteem and Implications for its Enactment," *Journal of Vocational Education & Training* (2013): 9.

One of the most frequently cited needs that employers are looking for in prospective employees is not theoretical knowledge or information regurgitation, but the ‘soft skills’ that can only be developed through experiential learning based methods. Critical thinking, problem solving, and interpersonal skills are three highly sought after qualities for new hires noted by a majority of businesses in the conference board’s survey.<sup>46</sup> This is not to say that theoretical knowledge is not important, but rather that student learning must be complemented by active challenges that help them to learn to work within group settings and problem solving as they are required to do so in the workplace.

The most effective way to provide these essential skills learned through training is by increasing the rate of experiential learning in professional degrees. Experiential learning is most associated with the concept of field-based learning, which supplements theoretical learning with internships, practicums, cooperative education, and service learning. This form of learning can also be classroom based, with teachers requiring students to make presentations, participate in simulations, and other engaging activities that stray away from the traditional lecture format.<sup>47</sup> Experiential learning is noted as the best way to prepare students for life after studies.

The Conference Board’s survey found that a majority of employers note the importance of experiential learning and providing students with co-op or internship opportunities to supplement their education. Despite knowledge of these benefits a large portion of employers do not engage in helping to provide these services for a variety of reasons. The most noted are a lack of time to mentor (38%), excessive red tape

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<sup>46</sup> Munro, “Skills for Success”, 54.

<sup>47</sup> Michelle Schwartz, *Best Practices in Experiential Learning*, Ryerson University, 4.

associated with partnerships (36%), and cost (25%).<sup>48</sup> A staggering 27% were unaware of either experiential learning or its value, and a further 21% were not convinced of its value. The troubling statistics continue when the survey asked respondents to conceptualize their opportunities to help engage in experiential learning and connect with PSE institutions to aid in the development of skills training. Less than 35% of employers in each region characterize these opportunities as being good, and less than 10% said they are excellent. In every region a total of 57% said that these opportunities are ‘limited’ or ‘non-existent’.<sup>49</sup> It is clear that there is a communication barrier between PSE institutions and employers for the type of skills training that is required of employees. This has led to a general gap in the provision of experiential learning leading to an inherent lack of initiative to help bridge the divide between government, business, and PSE institutions.

### **3.4. Other Jurisdictions**

Ireland and Germany have taken significant strides to address skills and labour shortages within their respective jurisdictions. Both countries have experienced a level of success due to their programs and institutional integration between PSE institutions, the government, and employers. These countries differ slightly in the ways they have addressed skills shortages, but their main focus is similar and concerns the provision of experiential learning opportunities. Their success for producing globally attractive graduates ready for the workforce is a credit to the systems that their governments have instituted. It is important to analyze the way that these jurisdictions have handled their education systems, as it provides some key lessons on how to breed economic success from within.

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<sup>48</sup> Munro, “Skills for Success”, 62.

<sup>49</sup> Ibid., 65.

## **Ireland**

Over the last decade the Irish government has committed itself to reforming its secondary and PSE institutions in order to help build a globally competitive workforce. Their efforts have been met with huge success due to their ability to continually adapt to labour market needs. The year 2012 marked an acceleration of this reformation when the government produced its first of two economic action plans. The first action plan published in 2012 emphasized the need for better labour market information with a strict adherence to building integrated education programs that give students the skills they need to be competitive in the workforce. The percentage of domestic skills demand across a number of sectors prior to the implementation of this action plan was at 45%. Just over two years since implementation, that percentage rose to 60%.<sup>50</sup> That 15% increase is evidence that change can come quickly if effective policies are put into action.

The foundations for both action plans have been structured around education funding, conversion and reskilling programs, continuing professional development, and strengthening the connections between PSE institutions, business and the government.<sup>51</sup> Establishing stronger communication between all stakeholders is a fundamental piece of this structure, as the Irish government strives to create cohesion as opposed to a top down approach. One of the important initiatives to carry this out has been its “adopt-a-school” program.<sup>52</sup> This provides businesses with a medium of connection for prospective

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<sup>50</sup> Department of Jobs, Enterprise and Innovation, *ICT Skills Action Plan 2014-2018*, Government of Ireland (2014), 5.

<sup>51</sup> *Ibid.*, 4.

<sup>52</sup> *Ibid.*, 6.

employees and students, and allows businesses to be involved in experiential learning programs for a variety of professional degrees. Having a system of sponsorship programs enables student's quick access to employees, rather than having to search on their own to gain work experience for their degrees.

A key to success for Ireland has been the development of a strong system of oversight and regulation to ensure that students, employees, and employers are receiving the proper services that they require. Employment permits for example are reviewed on a six month basis in order to keep up with the rapidly changing demands of a variety of jobs.<sup>53</sup> The group in charge of these reviews reports to the minister, but is comprised of members from a variety of backgrounds, which makes the approach accountable for all stakeholders involved. This type of information gathering and continual assessment translates into a strong system of development.

Much like British Columbia, the Irish economy requires a diverse profile of education certifications and employment options. This includes an increase in STEM degrees, a strong emphasis on trades degrees, and other forms of professional certifications. Certainly its greatest success has been with its trades programs, as graduate students are sought after globally. In order to oversee the effectiveness of these programs the government created a High Level Steering Committee, which engages industry leaders and SME's to evaluate the effectiveness and implementation structures of its action plan.<sup>54</sup>

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<sup>53</sup> Ibid., 7.

<sup>54</sup> Ibid.

Ireland's ability to bring together government, PSE institutions, and businesses into a truly effective public private partnership has been a major key to its success. This open relationship has given business owners the ability to not only access labour resources, but also work with PSE institutions and government to help review and contribute to course design.<sup>55</sup> Engaging business with curriculum is an effective way to ensure that students gain the skills they need when entering the workforce. This has produced an atmosphere of learning that is dependent on skills training and hands on experience. Similar to the BC Jobs Blueprint, the Irish Action Plan is also committed to changing the nature of recruitment within schools so that students are attracted to those degrees that are experiencing shortages. As previously noted this includes a higher emphasis on STEM degrees, and professional certifications that are based on experiential learning and training.

Forging connections across all sectors of the economy is the true strength of the Irish system and has been essential for the gathering of relevant and comprehensive labour market information, which is used to address skills shortages. The various working groups and committees do not have the typical hierarchical structure, but rather have brought together employers (big and small), unions, education and training providers, and government departments, to support this comprehensive structure.<sup>56</sup>

### **Germany**

The German training and education system has long been the strength behind its economic success, and has undoubtedly helped to shape the EU's strongest economy.

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<sup>55</sup> Ibid., 10.

<sup>56</sup> Una Halligan, "The Expert Group on Future Skills Needs and Ireland's Future Skills Needs to 2020," *Expert Group on Future Skills Needs* (2015), 2.

The system is based on support for experiential training and the idea that students should start on a career path through education at an early age. Secondary schools have a much greater emphasis on skills training than in North America, as students who enter high school are given the choice between varying levels of education. There are schools that specialize in skills training and relevant education, ones that prepare students for the more traditional academic learning, and others that help to give students tickets and credentials to enter the workforce following the conclusion of secondary school.<sup>57</sup> Students are not necessarily locked into one stream or the other depending on what they choose, as instruction contains education that is fundamental to building one's knowledge base to be competitive after the completion of school.

The post-secondary structure is comprised of both publically and privately owned institutions that cover all ranges of degrees and certifications. Publically owned institutions offer free tuition, while privately owned ones often charge fees. These tuition fees are still much lower than that found in post-secondary institutions in British Columbia.<sup>58</sup>

Similar to the way the secondary system is structured, PSE also follows a tiered approach to learning and desired outcomes. Students are able to obtain traditional forms of education at the major universities and private institutions (i.e. history, political science, general science etc.) or they have the choice of seeking a degree structured by vocational education. Vocational education degrees are based around giving students the relevant work experience they need to enter the workforce after schooling is complete. It

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<sup>57</sup> "German School System," *HowtoGermany.com*, (2015).

<sup>58</sup> Federal Ministry of Economic Affairs and Energy, "Vocational Training in Germany – How Does it Work", *make-it-in-Germany.com* (2015).

combines both theoretical learning and practical application that is most often found in trades degrees.<sup>59</sup>

The vocational training for trades degrees is similar to that found in British Columbia that has core theoretical components supported by a required number of work hours for experience. One thing that the German system does very well is to place students seeking trades certifications with employers that are linked to the institution where they choose to study.<sup>60</sup> Employers work closely with PSE institutions to build connections and help give students internship placements. This is different from trades training in British Columbia, where the onus is on the student to gain the required work hours to obtain their certificate.

There are two forms of vocational training that are applied mostly to university and professional degrees within the country. These are known as school-based vocational training, and dual vocational degrees. School-based training is a degree that has a learning structure similar to the various levels of nursing in British Columbia. A major portion of the students' education is focused on co-ops and internships, which are supplemented by theoretical training prior to these placements. There is less of an emphasis on job training as that found in trades certifications, and more emphasis on classroom learning. However, the experiential component still takes a large portion of the degree requirements. Internships in this type of vocational training are typically

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<sup>59</sup> Ibid.

<sup>60</sup> Ibid.



unpaid, unless it is a nursing degree or with a private institution.<sup>61</sup> The training involved with this form of education can take 2-4 years to complete depending on the degree.

Dual vocational degrees allow students to graduate with both a university degree and a professional qualification. This form of training is most common for engineering and business. Upon enrolment to a PSE institution, students are required to apply to a firm affiliated with the school that will provide the practical learning component. Without the successful enrolment with both a school and business, students will not be allowed to undertake this type of degree. Students do receive a salary for the internship portion of their education, and this is typically limited to two years of training and five years to meet full degree requirements.<sup>62</sup>

The German government has calculated that close to 2/3rds of students leaving secondary school go on to some form of vocational training.<sup>63</sup> The success of these programs is well known throughout society which has helped shape the conception of PSE into one not based on receiving a traditional university degree, but rather obtaining the type of education and training that will help students be successful in the workforce. The high level of communication between PSE institutions and businesses to provide students wishing to pursue these forms of education is a major feature of the success of this system.

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<sup>61</sup> Federal Ministry of Economic Affairs and Energy, *Vocational Training in Germany, make-it-in-Germany.com* (2015), 5.

<sup>62</sup> Ibid.

<sup>63</sup> Federal Ministry of Economic Affairs and Energy, "How Does it Work".

#### **4. Findings**

Certain sectors of British Columbia's economy currently face skills shortages and experience gaps that are on an upward trend for the future of the economy. This fact has been borne out through government and private publications that issue a warning for the economy that more needs to be done to provide citizens with proper skills training. The literature review points to the retirement of baby boomers, mismatches between PSE diplomas and employment, which is compounded by a deficiency in providing experiential learning, as the major factors exacerbating skills shortages. Forecasted economic expansion of the province, with the rise of LNG, is the motivation for the government to take an active role in addressing skills shortages. The estimated one million job openings by 2022 has given the province a substantial framework to set policies in order to ensure that these positions are filled.

The provincial government has recently shown greater initiative for dealing with this issue with the publication of the *BC Jobs for Skill's Blueprint*. This document is ambitious in scope and addresses a number of key areas for redirected funding within education and training. Importantly it notes the need for better labour market information and promotional efforts to steer students in the right direction for post-secondary education that is beneficial to the economy and the individual. This follows a trend for implementing better PSE assessments that are concerned with quality as a measure of employment attainment. The focal point for these publications is on trades diplomas, as the province wishes to prepare for LNG development.

A major problem with the Blueprint is that it does not delve into the specificities of the allocation of this funding, or exactly how better labour market information will be

structured by the work of the government. Much is said about the need to obtain better information, but the government's continued approach is to analyze Statistics Canada surveys.<sup>64</sup> The document is not devoid of spending directions, but it could have done more to uncover the exact policies it wishes to advance over time rather than splitting the funding up in a broad way. The direction the provincial government is taking is a positive one, but at face value the Skills Blueprint seems more about theoretical aims as opposed to in-depth policy formulation.

Although provincial publications do stress the need to market certain economically viable degrees, there really is no framework or set of guidelines that will help reform the post-secondary system. Attention is given to adding seats for trades training, some 5,000 ACE-IT spots a year, in secondary education.<sup>65</sup> The move toward changing secondary education is important, but what the province needs is a coordinated reformation of the way students are educated at various levels. The way to ensure success for this is through stronger communication networks between business, PSE institutions, and the government. The informative study by the Conference Board of Canada has pointed to the widening gap in communication and cohesion between these three main factions in the economy. Government publications do not go into significant detail on its plans to fund a better coordination effort, which is proof of a lack of engagement with all key stakeholders in the economy.

The government of British Columbia has historically shown inadequacy in providing proper quality assessment mechanisms for PSE institutions, and stronger regulatory frameworks to ensure that students receive proper training and education

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<sup>64</sup> British Columbia, *B.C. Skills for Jobs*, 17.

<sup>65</sup> *Ibid.*, 33.

through experiential learning. This has given an atmosphere of non-compliance allowing actors to structure their systems subjectively with little oversight. This has clearly been a problematic approach as the province is facing looming skills shortages, to which the Premier is quick to apply for exemptions to the Temporary Foreign Worker program to help fill the gaps. Making significant changes to regulatory frameworks and building communication networks will cost the province money, but these are the types of reforms that need to be implemented. There is power in the ability of businesses to forge connections with PSE institutions, to help structure curriculum, and give students more experiential learning opportunities. There is also significant power in providing strong regulatory frameworks to ensure that businesses and PSE institutions are operating in a way that is beneficial to the future success of the economy. These are main features of successful economic growth and the government should be guided in this direction to enact meaningful change.

An important truth to be taken from the historically lack luster efforts by the government to address skills shortages is that there has been consistent hesitation to make major changes to the system. The Youth Skills BC website is a perfect example of this. This is a policy direction the provincial government established to provide students with workplace experience, which is meant to supplement their degrees. One of the positive things here is that it shows a shell of a framework for providing experiential learning opportunities. This policy offers subsidies to businesses that hire youth between the ages of 15-29 on a fixed term basis, under the banner of giving students experience in the workplace. There is a reimbursement structure of \$2,800 per employee, and businesses

are allowed to have a maximum of three employees at a given time. This is supported by a \$1,000 training stipend if an employer wishes to upgrade its facilities.<sup>66</sup>

Unfortunately when one logs onto this website the majority of job postings have to do with labour help, with a few exceptions for apprenticeship placements. Among these are ads for dog walking, which is not a skill to supplement a PSE degree. Another issue with this website is that the job postings are extremely sparse. There were 22 posts for Vancouver, and single digit job postings for all the other regions of the province at the time of this writing. The policy prides itself on an easy application process, but this does more harm than good. What the province, and a policy like this needs, is a stronger regulatory framework and a serious focus on experiential learning as opposed to allocating funding for basic summer employment.

All of these deficiencies boil down to a need for stronger communication and network building among PSE institutions, businesses, and the government within the province. Working in tandem, key stakeholders can publish stronger organic labour market information and work toward solutions that engage all levels of actors as opposed to a misguided top-down approach. Trades do warrant special attention, but the government must show more initiative to address all sectors facing skills and experience shortages. This includes management positions, which require experienced workers to fill the emerging gaps. As the author Kerry Jothen has pointed out, the province will undoubtedly have to look outside its own labour force to fill positions in the future, but it does possess a significant amount of human capital to make the biggest contribution for filling this need. Now is the time to bring together all actors within the economy and work toward a truly coordinated effort to address skills shortages in the province. The

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<sup>66</sup> Youth Skills BC, "Get Youth Working," *getyouthworking.ca*.

German and Irish systems are excellent examples that show it is possible to make significant changes to the system that forges strong connections for all stakeholders in the economy. These changes will lead to the establishment of a globally competitive workforce that will shape prosperity and place British Columbia at the forefront of the nation's economic success.

## **5. Policy Proposal**

### **5.1 Expert Working Group**

The inaugural step that must be initiated by government to help bridge better connections with businesses and PSE institutions is to facilitate the creation of an expert working group. A variety of economic actors from these three main areas, including those who need to address skills shortages the most, will have a role with the expert working group. The intention is to give a diverse range of stakeholders an open forum to voice their concerns and help build strategies to combat skills shortages in the province. A secondary feature of this working group will be to provide the government with comprehensive labour market information, as it will be tasked with continually updating and publishing reports on its findings. The central role of the working group is to ensure that labour market needs for skilled workers are anticipated and met. In order to accomplish this the working group will be comprised of representatives from employers (both industry leaders and SME's), unions, education and training providers, and government departments.

The expert working group provides a medium of exchange among stakeholders so that stronger relationships can be forged, and future economic needs can be met. With the publication of the Jobs Blueprint, Final Jobs Report, and the Labour Market Outlook, the provincial government has a firm understanding of the areas facing skills shortages in the future and present term. For the most part, these publications have a strong industry/trades specific focus, but as the Conference Board of Canada's research has shown, there are other areas such as management and STEM occupations that need to be on the government's agenda as well. This will help to bring the province's universities

into the fold, with better assessments on the success rates of turning education into a meaningful occupation.

Constant analysis will be conducted for a variety of sectors in the province in order to publish this comprehensive labour market information. It will not be a sole body analyzing one sector over another, but rather constantly shifting its focus and producing relevant information that members can use to act upon. An important way to address the skills issue with such a diverse economy as British Columbia's is to compile extensive survey data. The recent reforms to the province's methods for quality assurance of PSE institutions, which engages students in the process, will be an important source of information on the health of the post-secondary system for job placements. Once this information is published and made public it will allow the working group to use this data to build on its recommendations.

The working group will be governed by an advisory committee, which will be delegated the task of establishing the structure of research projects. This will be run closely with the Ministry of Jobs, Tourism, and Skills, and it will ensure that experts from key sectors comprise this committee. As there currently is a number of publications with information on the sectors within the economy that are facing skills shortages, the committee should identify the areas most in need and work toward conducting research and recommendations on this basis.

The working group will split its research into the various sectors in need, and engage with as many employers as possible. Employers will be gathered from across the province and interviewed by the working group to better assess their needs. It will follow a similar method to the research that the Conference Board of Canada compiled for its



publication, which was in the form of a questionnaire covering all aspects of skills shortages. Central to this will be an evaluation of PSE institutions on their ability to teach students the proper tools they require to be effective members in the labour force. Similar interview processes will also take place with major stakeholders in these sectors. This includes representative bodies, trade associations, professional bodies, and provincial organizations. There will be a strong emphasis on determining why there are gaps in skills and experience, and what these actors believe should be done to address them. The working group will operate as a form of quality assurance mechanism, as it will be tasked with continually updating its information gathering to ensure that progress is being made.

A comprehensive quality assurance mechanism built into the working group will give the government more legitimacy in the eyes of business, as it shows an initiative to bridge the gap between stakeholders and come to organic solutions that are not imposed from the top. The consistent publication of labour market information will also allow sectors to view the strengths and weaknesses of their implementation structures, and give them the information that is needed in order to continue to build on their successes. This open forum will help forge that essential connection between business, PSE, and government so that further policies can be implemented.

Aided by the information published in these reports, the working group should implement an accountability framework to ensure that its recommendations are not only producing labour market information, but also being utilized to help strengthen sectors in the economy. This is a main purpose of bringing together all stakeholders into the operation of the expert working group, as it should be understood that the

recommendations that are being produced are for the benefit of the economy and not imposed solely by the government. A truly coordinated effort will be positive for the government, as its role is to aid in this process and give institutional legitimacy to those recommendations that are approved by the working group.

## **5.2. Sponsor-a-school Policy**

Following the creation of the working group, the following policies are focused on providing students with enhanced experiential learning positions. The government will play a key role in the creation of what is called the sponsor-a-school program, which will be focused on strengthening public, private, and PSE institution communication. The sponsor-a-school program's main purpose is to provide students with an open resource of experiential learning positions that will be offered by businesses and the public sector to supplement their professional degrees. Businesses that wish to enter the sponsor-a-school program will be provided access to a direct labour resource through a provincially accessible jobs database. Organizations will be marketed by their adopted schools as an opportunity to increase a student's experiential learning opportunities with the prospect of gaining full time employment following graduation.

The creation of a jobs database will be a complete overhaul of the Youth Skills BC site that is available to the public. Students enrolled in any PSE institution in the province will be able to log-on with their student IDs through school websites. This will allow students to access information on the businesses that sponsor their specific school and degree, giving them priority and special access to apply to co-ops and internships that will be updated throughout the entire year. As all PSE institutions are unique, and many specialize in certain areas of education, experiential learning placements will help to

support those strengths. This allows businesses to ensure that their organizations get a first look at prospective co-op students who will fit in with their business structure.

The jobs portal will display a number of categories that individuals can explore such as trades, health sciences, public service etc. Students will be able to select the area that fits with their degree and be given access to all of the employers that are offering experiential learning opportunities. Those searching will also be able to enter their resumes within the specified database if they do not wish to comb through the job postings, or are unsure of what job placement would best suit their needs. Businesses in the sponsor-a-school program will have a working relationship with PSE institutions, so students should not have a difficult time understanding the unique opportunities that are available to them. School counselors will learn this system and fit into the marketing scheme of the sponsor-a-school program making those businesses most attractive for students wishing to apply.

Similar to the German vocational system students in specific programs will have the opportunity to apply for experiential placements with the same firm throughout their entire post-secondary degree. This allows students to forge stronger relationships with a business of their choosing which will make the transition to employment much easier following graduation. It also allows institutions to provide stronger training regiments to students if they know that they will be hiring them over the course of multiple years. This is especially important for those firms who have voiced their uncertainties over the looming experience gap that is emerging for the province's workforce. By the time of graduation these students should have a firm grasp on the duties and responsibilities that

will be required from them, and they will possess the advantage of having a working relationship with employees within the organization.

The sponsor-a-school policy is not meant to fundamentally change the way all students complete their post-secondary education. Traditional academic degrees should still be offered and marketed to those students who wish to complete a more formal education. Much like the German system, this policy seeks to give students more options when entering the post-secondary education world, and especially market those degrees that will help them make an immediate impact in the economy following graduation. The prevalent skills gap and skills mismatches in the province points to this need to adopt the sponsor-a-school program, as a number of students enter formal education with no aspirations upon completion of the degree.

The long-term goal for the sponsor-a-school program is to ensure widespread adoption from PSE institutions across the province so that there will be constant opportunities for businesses to offer experiential learning placements. Offering a large number of co-ops and internship positions should allow businesses to have access to a wide range of students that come to them for their experiential learning. A steady volume of workers will ease the burden felt by employers that are worried about training students who end up seeking employment outside of their respective firms. If internship and co-op opportunities are frequent, more students are likely to stay on with the business following graduation, which will mitigate the loss of students who wish to take their prospects elsewhere. This will create healthy competition, as it will be the prerogative of businesses to market themselves as an attractive employment destination so that students will wish to join the firm upon completion of their degree.

Internships and co-op positions usually run during the summer months of the academic calendar to help accommodate the typical school schedule. This is a restrictive method for offering experiential learning, as it floods the job market in those summer months creating a high level of competition among students. It also has the dual effect of restricting businesses' access to students if they have better opportunities available during the fall and winter semesters. The sponsor-a-school policy encourages PSE institutions to promote experiential learning positions throughout the entire academic year. This will give businesses the flexibility they need in order to provide more positions. A job placement would be an average of 12-15 weeks at around 30-35 hours per week, which is similar to the Youth Skills BC internship program.

To ensure successful implementation of this policy, stakeholders will have to engage in strict monitoring and evaluation so that job placements adhere to the regulations that are established. The long-term goal is to implement a system similar to the dual vocational degrees offered in Germany, which gives students the option of pursuing experiential learning as credits for their degree. Through the sponsor-a-school program businesses and PSE institutions will build on their relationship to allow greater access to curriculum development that better reflects labour market needs. Businesses will be more involved in the education process over time, which will reduce skills and experience shortages as the economy diversifies.

Accountability measures will be integral to the continued success of the sponsor-a-school program policy. Businesses will be regulated with strong oversight to ensure that students are gaining the proper experiential learning that will supplement their PSE degrees. A predetermined set of goals and regulations will be formulated with the help of

the expert working group and PSE institutions. This will detail how best to translate what students learn in the classroom to the relevant experience they should gain through job placements. These measures will require extensive coordination and planning to be successful for ensuring that the province establishes a world-class work force.

To help facilitate the accountability mechanisms, the government, working in coordination with PSE institutions, will establish a skills coordinator office. The duty of this office will be to continually audit and assess businesses after a determined length of time based on an accountability framework that ensures that the proper experiential learning techniques are being utilized. Students will be able to file complaints against businesses that are not following the predetermined rules and regulations for experiential learning. This would initiate an investigation and possible removal of the business from the program.

The skills coordinator office will be tasked with the regulation of experiential job placements that are outside of the trades sector. To implement stricter regulations and accountability measures in the trades industry, the ITA will be given a similar regulatory framework to better screen and assess businesses in their training practices for trades related degrees. This will require an expansion of this external governing body.

In conjunction with the sponsor-a-school program the ITA will also help to facilitate job placements for trades degrees with PSE institutions. Red seal trades certificates require students to obtain a specific amount of training hours as part of the degree requirements; however, it is mostly the student's responsibility to obtain their own job placements. Part of the purpose of this policy is to aid students in their search for employment, making it a fluid transition from schooling to relevant work experience.

The procedure to become a member of the ITA is also flawed. It follows an easy application process that is largely unregulated in terms of quality assurance measures. This policy structured on accountability would reform this system through the implementation of stricter regulations to ensure that a focus on learning as opposed to laboring is utilized. Allowing PSE institutions to join in this process is a positive step for guaranteeing that students benefit from their placement, and that the work completed in the classroom is properly applied.

### **5.3. Funding/Feasibility**

Although the *BC Jobs Blueprint* notes the need to redirect the funding streams of the estimated \$7.5 billion in annual funding for training and education, it does not go into specific detail on the breakdown and total target funding during the 10-year period. For example, the blueprint notes that \$3 billion will be allocated to address high in-demand occupations, but it does not clarify how that money will be utilized. It is realistic to assume that a portion of that funding could go toward establishing the expert working group, and the sponsor-a-school program. This would allow money to be dedicated to creating the skills coordinator office, which would receive annual funding for its operation. The ITA's annual budget has remained constant at \$94 million, so there will be a slight increase in annual funding within this policy in order to support the accountability changes that mirror the skills coordinator office. That \$94 million does not factor into the Blueprint's budget, so a modest increase would be feasible.

It is difficult to estimate exactly how much funding will be required for establishing the expert working group and the skills coordinator office. The high level of coordination and implementation of the expert working group will undoubtedly incur

significant costs, but a major impetus of the blueprint is to publish and fund better labour market information. This is already included within the budget's framework as it details the need for the province to establish world-class labour market information gathering techniques. Due to this focus on funding better labour market information, and the government's attention to redirecting annual funding budgets, the expert working group can be financed by this budget without having to ask for a significant increase.

The skills coordinator office and sponsor-a-school program will require a significant amount of funding to ensure that students are being placed with experiential learning opportunities. The Blueprint's expanded support for BC Access Grant for Labour Market Priorities fits in with the sponsor-a-school program, as it gives students financial incentives to move throughout the province for their experiential learning opportunities. This includes a system of loan forgiveness and student financial aid grants. Some of the required programs are therefore already in place, so funding will need to be diverted to the skills coordinator office so that it has the ability to serve its accountability function and establish cohesion amongst PSE institutions, government, and businesses.

Costs associated with providing internships and co-op placements for students can be a burden for businesses that are financially incapable of providing these services. A government subsidy is one way to help businesses get the proper funding that they require. This policy asks the government to provide an \$8 an hour subsidy to students for paid internships, with the requirement that businesses at least try to match that fee. This would mean roughly \$16 dollars an hour as a base student rate, which is slightly above the current price for the BC Youth Skills program. For students who work 30 hours per



week over a three-month period this would equate to \$2,880 per individual. The current reimbursement is \$2,800, so it is just an \$80 increase. Work placement timelines will vary, so this serves as a rough estimate. The Youth Skills Program also allows for an application of a \$1,000 reimbursement to upgrade training facilities, and this would continue to be supported through this policy. Since this program has not been implemented on a wide scale, it is difficult to determine how many students will seek experiential internships each year. The subsidy structure would also have to be applied differently depending on the nature of the job requirements.

The \$8 an hour fee is negotiable and would depend on how much money the government is willing to spend to fund this program. The length of co-op's and internship opportunities will also vary, and could be closer to 15 weeks and 35 hours per week. If 3,000 students used the program at 30 hours a week for 12 weeks, with a subsidy of \$8 per hour, it would require a total of \$8.6 million in annual funding. This would be derived from the \$7.5 billion budget, which would likely require a priority shift in funding, but one that is necessary to provide students with proper experience. If 3,000 students is a benchmark rate it will require \$86 million in funding over the 10-year time frame. This of course is a very basic estimate, and would more likely be in the range of \$100-150 million, which should fit in with the \$7.5 billion annual budget toward training and education.

#### **5.4. Consultation, Communication, Implementation**

The expert working group will serve as a consultation mechanism and communication tool between the government, PSE institutions, and private enterprise. The initial step will be for the government to reach out to businesses and high demand

sectors facing skills shortages, with the goal of bringing them together to help form the working group, which will then work in tandem with recruiting members of PSE institutions. The driving force behind this will be to consult these stake holders by stressing the need to establish a coordinated effort as the way to solve the skills gap issue that the province faces.

Priority areas have been well documented by private and government research, so it is essential to contact as many businesses within these sectors as the first step for communication and creation of the expert working group. The government will market this strategy of PSE institution inclusion in the process as a way to give businesses better opportunities to establish working relationships with the province's post-secondary schools. One of the main goals of the working group is to foster these connections and create lines of communication between the public, private, and PSE institutions that will evolve over time with the entrenchment of these policies.

Due to the existence of labour market information on priority areas in the province's economy, the government will be able to target these sectors and form the expert working group within a short period of time. It will not require an additional study for identification, but rather an effort to bring together these stakeholders as quickly and effectively as possible. A time line of one year for the formation of the expert working group is feasible. A number of interviews and surveys will be utilized in order to build this group, which will be conducted over a series of months and include inputs from stakeholders in businesses and PSE institutions across the province. Priority areas will be further identified during this process and it will give those stakeholders most interested in addressing skills shortages a chance to voice their concerns. At the end of this year

period, the working group should be fully established and labour market information gathering and assessments will commence.

The networks established during the expert working group formulation stage will support the implementation of the sponsor-a-school program. This serves as the next step in communication and consultation for addressing skills shortages within the proposed policy. The government will aid in the facilitation of this consultation process with the creation of the skills coordinator office. This is a massive undertaking, first for the establishment of a new government office, and second for increasing the communication and consultation process between PSE institutions and businesses across the province. The basic structure of the sponsor-a-school policy should be established following the creation of the working group. The goal will be to set the program up in its basic form within a year, and build on this structure over the course of the next 5 years. As noted previously, the funding targets will be supported by the Blueprint's budget, but that too will require a shift in priorities to ensure proper implementation. The expansion of the economy by 2022 will give businesses and PSE institutions the drive they need to make sure that these targets are being met within a strict timeline.

The government will have to work closely with the ITA board to implement the reforms to its regulatory structures and increase funding so that the priority shifts toward better business assessment and accountability measures. A strong communication and consultation effort will be underway prior to the start of the expert working group, as these are changes that must be implemented as soon as possible so that the economy can withstand the economic expansion created by LNG development. The changes toward

better connections from PSE degrees to experiential learning will be put on hold until the implementation of the sponsor-a-school program.

These policies will be marketed to society as a long-term stimulus effort to ensure increased productivity and strength for the future of the economy. These ideas on creating a healthier economy that is more inclusive of workers within the province has already been established and accepted through the BC Jobs Blueprint. News and media reports have helped people in society understand the levity of the skills issue that the economy faces, and many of the reports on the creation of the LNG market in BC have focused on the need to properly train the workforce. A policy effort of this undertaking, that seeks to bring all stakeholders in society together to tackle this issue rather than a hierarchical approach controlled by the government, will further strengthen support for these policies amongst the populace.

## **6. Obstacles for Implementation**

The policies that are proposed within this project will inevitably face obstacles for implementation. The government will undoubtedly be concerned with funding and accountability mechanisms to secure the work that is required in order to structure and oversee this framework for change. Businesses will likely be concerned with funding for implementation, and the time that needs to be dedicated to ensure the system is without flaws. Finally, PSE institutions will also likely be concerned with the entire process as a whole and the role that will be required from them to implement policies that may seem invasive to their otherwise private operation. This section will explore these main obstacles in order to shed some light on the possibility of full-scale implementation.

A major obstacle that the government will have to overcome is adhering to a legitimate time frame for action. Since the economy will witness a large expansion over the next decade, it is imperative that these policies be implemented as quickly as possible. This will require a strong coordination effort, with all actors on board in a relatively short period of time. The government will be front and center leading this effort, which will require significant work from the Ministry of Jobs, Skills and Tourism to facilitate a smooth operation. A one-year deadline for the formation of the working group should be ample time, but again it will only be operational if the government is fully dedicated.

It can be expected that the government will want assurance mechanisms to be set in place if it is to embark on such a large civil undertaking. This would likely require greater investigation into these policies before the government goes forward with a commitment. Work from the government is essential before any of the implementation

stages take place, so there will have to be a commitment to investigate these policies as soon as possible.

Since the government will be leading this effort, it will be forced to redirect and possibly add more funding to ensure these policies are implemented. Funding decisions can be very difficult to agree upon within government, so members of the legislature will have to show their support if these policies are put to a vote. It is realistic to assume that members of government may be wary of embarking on more funding, as the *Jobs Blueprint* is already in place. Those who helped to draft this framework could foreseeably be the greatest opposition against the new proposals as the *Jobs Blueprint* is in its beginning stages. Dissenting government officials could wish to see their framework through before making any changes to its implementation.

As mentioned in preceding sections, a number of business owners surveyed by the Conference Board of Canada voiced their concerns with experiential learning and the perceived burden that this may cause. It is plausible to believe that business leaders will be opposed to providing training spaces due to a lack of funding or time available to train a steady stream of students obtaining professional degrees. The fear of employment poaching is also a major risk for many business members, as they would rather keep students who train with them under contract to avoid their practices or productivity being compromised. Although the policies attempt to safeguard against these concerns, especially in the initial stages, businesses could be very reluctant to support these changes without witnessing any level of success prior to implementation.

British Columbia has a highly unionized labour force that must be engaged throughout the entire process. This again will be a major consultation effort from the

government and private sectors, and the BC Federation of Labour has to be an integral part of negotiations with business in the province. Labour union protections would have to be negotiated, especially with regard to offering students co-op placements within unionized businesses. In terms of summer internships the price negotiations for subsidizing student placements would have to be deliberated by union members.

Government and labour unions have historically been at odds on a number of issues, so a mediation effort could possibly take place. These negotiations could prove to be another timely obstacle for the implementation of these policies, and could extend the process longer than expected.

The sponsor-a-school program demands a significant amount of attention to facilitate a cohesive program for successful implementation, from both government and the various PSE institutions that choose to enter this program. Training hours for school counselors must be provided, and this is a cost system that has to be accepted by PSE institutions. There will be a refocus for the ways in which institutions market job opportunities for professional degrees that will lead to employment following graduation. This process will take time to implement, and requires a framework of guidelines that PSE institutions and their counselors must adhere to when marketing the program for prospective students. Because the skills coordinator office is a government run institution, PSE institutions will be working closely with the public sector to ensure the sponsor-a-school program is run properly. Although many PSE institutions are privately run, but publicly funded, they will have to accept the work done by government in this process.

The nature of expanding experiential learning and reformatting certain professional degrees to accommodate these recommendations could also be another major obstacle to the implementation of this policy. PSE institutions could believe that the current system is working well, and as such, they may not see a reason why the government would ask for significant changes to the way students are taught within their private institutions. This could lead to a number of institutions opting out of the sponsor-a-school program, and wishing to maintain the systems they have in place without external interference. The future productivity of the province's economy has to be used as a marketing tool within this consultation process, as well as the statistics on the skills gap that the province currently faces.



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