An Alternative Approach to Prior Learning and Advanced Placement in Post-Secondary Programs for Veterans: The Canadian Experience

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OVERVIEW

In 2006 British Columbia Institute of Technology (BCIT) partnered with Honor House, a group of business leaders, veterans and Canadian forces members supporting wounded soldiers returning from the Afghanistan mission to provide career counseling and resume writing services. It quickly became apparent through BCIT's work with Afghanistan veterans that there was a significant amount of military training and experience that potentially matched high skill demands in the labor market and therefore learning outcomes at post-secondary institutions. In 2006, Canadian post-secondary institutions offered limited transfer credit for military training. Based on experience acquired through the partnership with Honor House, BCIT established a student research project with the purpose to study the possibility of expanding recognition of military training based on an assumption that the combination of military training and experience could reveal potential credit equivalencies that were not currently articulated.

The potential for establishing advanced placement education pathways for soldiers in post-secondary programs posed two challenges. The first was the nature of the military training model did not lend itself well to traditional prior learning assessment processes. The second challenge, or question, was whether any systematic patterns existed that would allow us to identify common skills, traits and

abilities within a cohort, thereby allowing economies of scale and other efficiency gains in the assessment and review process.

In addition to the logistical challenges mentioned above, research identified the issue of veteran "engagement" as one of the major challenges in developing successful pathways and advanced placement programs to support transition. Many countries offering education programs to assist veterans in transitioning to civilian life – including Canada and the United States – had experienced the problem of engagement on the part of veterans. Research identified that veteran engagement was the result of two main barriers. First, the change in environment from military life to civilian life was perceived as too vast. Second, existing prior learning program articulations available to veterans were aligned with their military experience rather than their post–secondary training interests. Therefore, to enable veterans' transition through post–secondary education pathways veterans required holistic support through the transition period and post–secondary program options focused on veterans' interests and preferences.

In 2009 BCIT launched its Military Skills Conversion Program.¹ While the program's primary purpose was to build and offer educational pathways, a holistic approach was adopted which included a comprehensive group of services including resume writing and job search skills, entrepreneurial workshops for veterans and a network of support services and referrals to agencies specializing in transition support. BCIT partnered with other organizations including the Veterans Transition Program (which treated PTSD) and the Royal Canadian Legion. The program started as a pilot project and has grown into the single largest program of its kind in the Canadian post-secondary system. Currently there are 42 soldiers enrolled in the various BCIT programs and 41 have graduated since the launch of the project. The GPA's of the soldiers who have graduated are higher than their

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¹ The program was initially launched under the name "The Reservist Re-Entry Program", which was, in part' due to the large number of reserve regiments in the local community. The name was later changed to reflect the program's broader appeal to all service men and women, regardless of status (regular, reserve, veteran).

civilian counterparts on average. Ninety-five percent of the graduates have GPA's higher than 70% with half of these being honors students with GPA's over 80%.

THE PILOT PROJECT AT BCIT

The BC Institute of Technology has an enrollment of 46,000 full and part-time students. It has 340 programs that range from certificate to master degrees. The scope of its programming includes trades, engineering diplomas and degrees, a variety of health science diplomas and a nursing degree, as well as one of the largest business schools in the province that offers over 20 different diplomas and two bachelor degrees.

A feature of the BCIT model that is significant to this project is the cohort-based delivery model of full-time programs. Full-time diploma program students are admitted into a program and assigned to a cohort. Students in a cohort are registered in the same courses and are assigned the same curriculum, workload and schedule. With very few exceptions to the model, all students progress through the program in the courses at the same pace. Except for attrition, all students within a cohort begin and graduate from a program at the same time. This feature of the BCIT education model offers two benefits in this context. First, the cohort model of program delivery mirrors aspects of the military environment. Second, it enables the ability to track and test groups of students over time that will have the same incremental education at every instance of testing. The lack of variability in course load and program progression produces a "clean" data set.

ARTICULATING MILITARY TRAINING – OVERCOMING PERCEIVED SYSTEMATIC LIMITATIONS

Pedagogical conventions dictate a prescribed method for assessing prior learning and establishing post-secondary learning outcome equivalencies through what is commonly known as Prior Learning Assessment and Recognition (PLAR). Military training utilizes the combination of training and experience to train soldiers, which posed a challenge in assessing prior learning equivalencies due to conventional thinking regarding achievement of a learning outcome. In order to fairly consider

the breadth and depth of the many disciplines associated with military training a new method of prior learning assessment was required. It also became apparent that given the military training model, the prior learning assessment could be grouped and "systematized". Creating an approach that enabled systematized prior learning assessment (PLAR) would significantly reduce the labor-intensive resources necessary for individual assessment, which had historically served as a barrier to assessment for many post-secondary institutes. This evolved an approach to PLAR called Advanced Placement and Prior Learning (APPL) that arose from a 2009 pilot project at BCIT.

One significant difference about this pilot project was the systematized approach used to determine program admission. Normally admission is determined through completion of primary academic requirements, in this case Grade 12 English and Grade 11 Math, and an assessment of prior post-secondary academic work: grades in courses and credentials previously earned by the applicant. For soldiers, we developed an outcomes based approach that aimed to compare military training and experience outcomes with post-secondary program completion outcomes.

Generating Program Completion Outcomes

To start, we identified program completion outcomes: the necessary skills and abilities required for successful completion of a program. Essentially, we asked the question "If we replicated the total amount of training and development embodied in the soldiers being assessed, what would such a program look like in the BCIT framework and what level of credential would be awarded for such a program?"

To address the problem of determining equivalencies, an alternative assessment model was developed. Using Applied Placement and Prior Learning (APPL), the new assessment model, a block learning outcome approach was created. First, a cross-section of diploma programs were reviewed, breaking down individual courses into learning outcomes. This resulted in a set of learning outcomes for each program. Second, a scorecard system was developed that allowed an individual to be scored as to the relative proficiency of each learning outcome. The scorecard

created a method to assess both the breadth and depth of learning outcomes. The scorecard generated an overall program benchmark based on learning outcome proficiency rather than credits earned or grade point average. In a similar fashion, all of the basic training models for the Canadian Forces (army branch) were also assessed. This produced a common metric for comparison of military training to BCIT programs.

Generating Military History Completion Outcomes

Review and comparison of military training and work history proved complex and challenging. The learning outcomes for the military programs were compared, both individually and as a block, to the diploma program outcomes. While there were great deals of differences in many of the technical, field specific outcomes, there was a high degree of overlap in many of the general learning outcomes (i.e. teamwork, problem solving, time management, etc.)

An extensive mapping process was created to capture and analyze learning outcomes acquired through military training modules and link them to learning outcomes and courses at BCIT. The mapping process was carried out in collaboration with the training officers and commanding officers of local regiments to develop a skills inventory. In addition to the evaluation and mapping of the military training modules, extensive research was done to reveal potential learning outcomes associated with deployment and the experience of soldiers during the deployment period. The mapping process established standardized profiles on duties, expectations, and experiences of deployment.²

The evaluation tools consisted of a combination of aptitude and problem solving tests, personality profiles, and interviews that reviewed each soldier's military and work history. A review of military training and work history included assessment of a soldier's military training module completion, deployment and military service experience. The evaluation tools created a standardized approach to assessing

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² The majority of applicants had deployed to Afghanistan, however the program also had applicants who had been part of earlier missions including Bosnia and Somalia.

military training modules and experience against the established program completion outcomes.

FINDINGS

The initial research revealed two interesting findings. First, the assessed skills and abilities of the soldiers far exceeded the expected outcomes of military training modules. Second, a soldier's military history was not indicative of his or her interests and aptitudes. This supports proposition that an outcomes based assessment approach is a more appropriate method of evaluation. Analysis of soldiers showed that those who deployed, or were eligible to deploy, had received the same minimum amount of standardized training. This translated to a high degree of consistency across modules being mapped into post-secondary programs. Further, it was determined that the pre-deployment level of training was equivalent to a technical diploma.³

Interest and Aptitude-Lens vs Reality

The pilot project employed the World of Work Inventory (WOWI⁴) to determine aptitude and interests of project participants. WOWI results indicated strong interest and fit for areas of business, public services, and health sciences. In contrast, a credential based evaluation considering only formal military modules as transcripts would likely have revealed that the best post-secondary fit would be found in trades training or vocational program such as mechanics, truck-driving, or construction. The soldiers themselves, in self-evaluation reports, indicated that they felt they had been best prepared for policing or private security careers because they hold the perception that their training is position specific. Given the educational

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³ The definition of a technical diploma used here is a two-year, full-time diploma in either vocational or academic fields which is focused in scope.

⁴ WOWI, or World of Work Inventory, is an assessment tool that measures both aptitudes and interests of individual. WOWI benchmarks the individual against two criteria: a) relative to others of the same age; and b) relative to others of the same education level. WOWI has proven successful in matching individuals to professions where they will experience a high level of satisfaction.

requirements of most Canadian police forces, most soldiers believed private security or laborer were the most likely career paths available.

A BCIT Program Fit

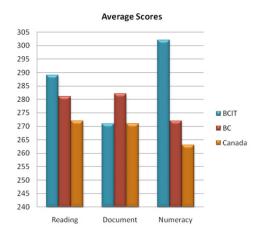
The WOWI results, combined with results of the learning outcomes scorecard and interview process, led to the conclusion that a majority of the soldiers had both the ability and suitability to be successful as advanced placement students in business diploma programs or as direct entry to the advanced diploma, which delivers the foundation courses for entry to the degree completion program in business administration. BCIT programming tends to be modular in nature, where diplomas can ladder into advanced diplomas and degree completion programs.⁵

BENCHMARKING THE MODEL

In order to validate the findings in the pilot and determine potential growth of the program into other fields, extensive benchmarking was carried out by testing and evaluating the civilian counterparts in the business management diploma program. Benchmarking involved several elements; including a) application of World of Work Inventory, b) statistical analysis of course grades and GPA's, c) attrition ratios, and d) peer and faculty feedback. The data came from test scores, questionnaires, and focus groups.

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⁵ At BCIT many fields of study are structured in a framework known as the "2 by 2 model". A two year diploma ladders into a 60 credit degree completion program.



In addition to the evaluations above, the students in the business program, both civilian and military, are part of a time series study using the "Test of Work Place Essential Skills" (TOWES⁶) testing tool. First, the TOWES was issued to students at regular intervals through their academic progression to measure the development of their workplace skills. The purpose was to measure the extent students acquired or developed relevant human capital in the context of TOWES. Second, the TOWES was used as a cross-sectional study of soldiers and civilians in the business program. The TOWES was used both to benchmark soldiers and civilians at the initial admissions stage and as a metric to evaluate relative progression over the life of the program.

TOWES AND BCIT BUSINESS STUDENTS

The application of the TOWES test on business students at BCIT produced the following: First, BCIT students, on average, scored higher than the HRDC findings

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⁶ In the early 1990s, the Government of Canada launched the Essential Skills Research Project (ESRP). The Project identified nine Essential Skills: reading text, document use, numeracy, writing, oral communication, working with others, thinking skills, computer use, and continuous learning. The ESRP developed a way to profile the skill requirements of occupations in the labour market which lead to the development of TOWES. The TOWES allows employers to test their workers to determine their levels of those Essential Skills and put into place plans for improving them to achieve better productivity and workplace safety.

for the BC population and the Canadian population in all three categories. Second, students who completed two years of the business program scored higher than the students tested at the end of one year in all three categories. There was a significant rise in scores in reading and numeracy in comparison to the first and second year students. While the first year students were strong in document use relative to numeracy and reading, there is a significant upward shift in the score between first and second year students in this area as well. While the sample was limited to students in business programs, the results suggest that students at BCIT see a marked improvement in their essential workplace skills.

BCIT AND RESERVISTS

After analyzing the results from the Canadian reservists and comparing them to the Business students at BCIT, we found that, on average, reservists scores were between those of first year and second year students. Based on an essential skills evaluation, reservists entered the program with higher skills scores than their civilian counterparts. These results are consistent with the overall performance of reservists in the pilot program. WOWI results revealed that Canadian reservists were not significantly different from the students in vocational training potential, job satisfaction indicators and career interest activities.

The next issue to be addressed was to determine if there were common characteristics, skills, and abilities within the soldiers as a group. Further, it was necessary to evaluate these attributes in a manner that allowed direct comparisons to civilian activities, in particular students in post-secondary programs. This was done using focus groups, extensive one-on-one interviews and standardized testing with exams such as Test of Workplace Essential Skills (TOWES) and World of Work Inventory (WOWI). The findings of the empirical research demonstrated a high degree of homogeneity across the reservists in the sample. Further, when compared to post-secondary students who had also participated in the same testing procedure, the reservists scored higher than students who had completed one year of post-secondary education and were slightly below the average scores of students who had completed technical diplomas.

As a result of the findings, reservists were given advanced placement into a program that normally required a minimum of a diploma as a prerequisite. The initial results of the pilot program proved successful. As of June 2012, 90% of the reservists at BCIT completed the program. Further, the average GPA of the reservists was higher than the overall program GPA. Seventy-five percent of the soldiers who graduated from the diploma program went on to complete their bachelor's degree within 12 to 18 months.

The success of the pilot project with the reservists suggested that the model could be expanded and applied to other groups such as first responders and groups of mature students with common characteristics, as well as those from population groups identified as having common characteristics and experiences (i.e. remote communities and Aboriginals).

ENGAGEMENT

Focus groups and interviews were used to address two issues. The first was to validate the findings of the prior learning assessments and TOWES scores by reviewing each participant's history and records. The second purpose of the focus group and interview process was to address the problem of "engagement." Experience from the pilot program with the reservists reinforced the findings of researchers⁷ regarding the problem of certain groups not engaging in educational opportunities, even when fully funded.

The focus groups revealed that veterans believed their training prepared them for military service; however, they had not considered potential similarities and synergies between military training and post-secondary education or civilian careers. Veterans often reported a sense of uncertainty at the prospect of transitioning from their environment into the culture of a typical post-secondary institute. In other instances, veterans were unaware of the value of the skills and abilities they possessed

⁷ Eliott, Marta; Gonzalez, Carlene; and Larsen, Barbara. "U.S. Military Veterans Transition to College: Combat, PTSD, and Alienation on Campus", (2011) Journal of Student Affairs Research and Practice, Vol 48, Issue 3

and therefore struggled to believe they were equipped for programs they qualified for. Given the nature of military training, veterans have the perception that their training is only specific to their position in the military.

EXPANSION OF THE MODEL: THE FUTURE OF ADVANCED PLACEMENT AND PRIOR LEARNING (APPL)

Expansion of the APPL Model requires ongoing research and support. Research has indicated that expanding the breadth of pathways available to veterans and expanding the availability of APPL pathways in post-secondary institutions across Canada is required to address engagement issues.

Ongoing research will continue the development of the APPL assessment model to reveal the value of military training and experience in the context of post-secondary learning outcomes across program offerings. At present, veterans have access to advanced placement into 13 BCIT programs ranging from business, telecommunications, forensics, construction, and engineering. The goal is to continue to map advanced placement pathways into health sciences, electrical, mechanical and civil engineering programs.

Expanding access across Canada requires the creation of several partnerships and sponsorship. In 2012 the model was presented to the Canadian Senate⁸, which generated significant interest in the development of a national program. The Federal Government, including Veteran Affairs Canada, Employment and Social Development Canada, and National Defense and the Canadian Armed Forces currently supports the Military Skills Conversion Program. In 2014, a national consortium convened by Canada Company ⁹, part of Military Employment Transition (MET) was established to pursue expansion of APPL in post-secondary institutions across Canada. BCIT leads the national consortium with the goal to

⁹ Canada Company is a not-for-profit national organization supported by Veteran Affairs. Canada Company has a mandate to transition veterans into civilian careers and works with organizations, such "Helmets to Hardhats" and the "10,000 Job Initiative"

⁸ The Canadian Senate had been tasked with doing a complete review of the state of veterans in Canada, including all programs, support services to aid in transition to civilian life.

The Colloquium for Information System Security Education (CISSE) Special Edition: Educational Approaches to Transition Former Military Personnel into the Cybersecurity Field Spring 2015

build a network of post-secondary institutions that grant credits for military training, to address education and employment barriers and increase mobility of soldiers.

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