Dual Credit

Secondary to Post-Secondary Transitions:

Dual Credit Policy and Practice in BC and Elsewhere

Prepared by John FitzGibbon, Associate Director, Transfer and Articulation, BCCAT

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This report and the related executive summary are available at bccat.ca/research/projects/dualcredit

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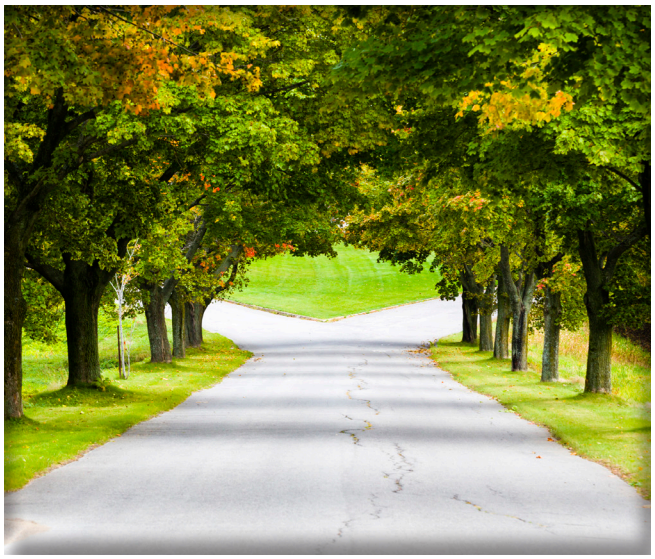
Introduction

There has been considerable interest in British Columbia in improving secondary to post-secondary transitions, and the provincial government and secondary and post-secondary institutions have adopted a number of strategies intended to aid in successful student transition from one system to the other. This paper looks specifically at the policy and practice of dual credit, i.e., granting credit at both secondary school and post-secondary institutions for completion of a single course. This review has been occasioned by the ongoing interest of institutions and policy makers in designing usable and appropriate paths for successful student transition to post-secondary education and credential completion and in the prospective revisions to the BC secondary Graduation Program. The report surveys the academic literature on dual credit, examines current practices in North America by type, benefit, and issues, and offers some directions to consider.



"Dual enrollment emerged in a decentralized way over the 1970s and 1980s to keep talented students challenged, help smooth the transition between high schools and college, develop vocational readiness, and give students momentum toward a college degree" (Klopfenstein & Lively, 2012, p. 60).

Methodology

The data in this paper were drawn from multiple sources. They include on a review of the literature on secondary to post-secondary transitional programs; examination of websites of BC Transfer System member institutions; 28 telephone interviews with personnel in post-secondary institutions (PSIs), school districts, ministries, and agencies with responsibility for dual credit programs; and an electronic survey of BC post-secondary institutions.

The review of the literature was conducted using “dual credit”, “dual enrolment”, and “concurrent enrolment” as key search terms, and concentrated on research involving practice and policy in the United States, BC, Alberta, and Ontario. The literature review was used to identify dual credit models, purposes, goals, benefits, and issues and was used to generate a list of interview questions.

Each BC Transfer System institution’s website was reviewed and 19 persons responsible for dual credit programs were interviewed by telephone or responded to questions by email—in some cases the registrar and in some cases a coordinator or manager with specific responsibilities. Based on the these responses, the author prepared a survey of PSIs, which was circulated to twenty-nine post-secondary institutions in the spring of 2014 by the BC Registrars Association (BCRA) and the BC Associate Registrars and Managers Association (BCARMA) with 13 institutions completing, for a response rate of 45 percent. The survey questions are attached as Appendix I. In total, of the 38 members of the BC Transfer System, twenty-two institutions provided information for this study; including eleven colleges, six universities, BCIT, and four private institutions. In addition, telephone interviews were conducted with personnel in the Industry Training Authority (ITA), the BC Ministry of Education, Alberta Education, Go2, and Advanced Placement Canada. The author also initiated discussions about dual credit arrangements at a number of annual provincial articulation committee meetings including Carpentry, Automotive Service Technician, Tourism Management, and Environmental Education and facilitated two sessions on the topic at the annual Career Education Society convention. The list of contacted agencies is found in Appendix II. The draft paper was circulated to individuals interviewed and survey respondents for comment and review before the paper was finalized.

Literature Review

This section discusses four topics identified as significant through the analysis of dual credit literature--definitions, forms, target groups, and purposes. The discussion of each topic is intended to provide the context and background for examining current practice in BC, the issues raised in the review, and the possible policy and practice directions. The variety of definitions of dual credit across North America is covered as is the various forms that dual credit can take in different jurisdictions. The variety of forms can make comparison difficult and the paper demonstrates how target groups for dual credit programs--high achieving students, career-oriented students, and students at risk—can be used effectively to describe programming. This section also explores the most commonly noted purposes of dual credit programs: preparation for post-secondary education; education acceleration; cost savings; recruitment and enrolment strategy; goodwill and community outreach; high school and credential completion; engagement; and educational choice with a description of each.

Definitions of Dual Credit

Secondary to post-secondary transitional programs are described in the literature and by governments and institutions in North America using a wide variety of terms, including “dual credit”, “dual enrolment”, “concurrent enrolment”, “concurrent admission”, “accelerated credit enrolment”, “educational acceleration”, “accelerated entry”, “post-secondary transitions programs”, “early or middle college high schools”, “school-within-a-college programs”, “secondary-post-secondary learning options”, and “credit based transition programs”. In their review of US dual credit policy, Borden, Taylor, Park, and Seiler (2013) note 97 different terms used for dual credit practices, and identify “dual enrolment”, “dual credit”, and “concurrent enrolment” as by far the most popular terms. In a guidebook

for practitioners produced by Columbia University's Community College Research Center (CCRC), Edwards and Hughes (2011) note that 'concurrent enrollment' is sometimes used interchangeably with 'dual enrollment' although some programs in which students earn high school and college credit simultaneously are known as dual credit. These variations in definition in the US have led to a number of calls for consensus on terminology (Lowe, 2010; Borden et al., 2013).

The same variation in definition exists in Canada, although to a lesser extent. The province of Alberta defines dual credit programming as "high school students participat[ing] in apprenticeship training or post-secondary college or university courses earning both high school and post-secondary credits for the same course" (Alberta Education, 2013, p 5). In BC, definitions vary by institution and agency. Northern Lights College is typical of many BC institutions in describing dual credit as allowing "students in grades 11 and 12 to gain credits towards secondary school graduation while also earning credits in a post-secondary academic course, vocational program, or trade or apprenticeship".[1] A number of BC institutions distinguish between dual credit and concurrent studies. For example, the Simon Fraser University (SFU) website distinguishes between concurrent admission and dual credit. Concurrent admission (concurrent studies), encourages high achieving secondary students to register, pay tuition, and enroll in up to two courses but which do not count towards their graduation requirements. In comparison, dual credit allows students to register with tuition covered by the school district, and take courses that count both toward high school graduation and an SFU undergraduate degree.[2] The BC Ministry of Education does not use the term "dual credit" explicitly, but includes a description of the process in the *Graduation Program Order* and in provincial policy documents such as *Earning Credit through Equivalency, Challenge, External Credentials, Post-Secondary Credit and Independent Directed Studies* (British Columbia Ministry of Education, 2004).

> "There is considerable variation and confusion in the usage of the terms dual enrollment, dual credit, and concurrent enrollment. States use these terms in different ways, and individual programs often use them interchangeably" (Lowe, 2010. p. i).

The College Board's Advanced Placement (AP) and the International Baccalaureate (IB) Diploma Program could also be described as dual credit programs as courses in these programs may qualify for high school and post-secondary credit, although not simultaneously and, depending on the receiving institution, may offer course exemption rather than specific course credit. Many jurisdictions and institutions grant dual credit for AP and IB courses, although they may not include this fact in descriptions of dual credit opportunities in their policy documents or on their websites.

Forms of Dual Credit

There are, as the range of definitions of dual credit suggests, a number of delivery models currently being employed across the continent making classification and comparison difficult. There are also a variety of approaches to offering dual credit and it is beyond the scope of this paper to examine each in any depth. However, it is useful to identify the elements by which programs can be described and compared. Karp,

[1] See http://www.nlc.bc.ca/Programs/DualCreditPrograms.aspx
[2] See https://www.sfu.ca/students/concurrentstudies.html

Bailey, Hughes, and Fermin (2004) use the following ten features to compare dual credit legislation in the 50 US states: target population, admissions requirements, location, student mix, instructor characteristics, course content, method of credit earning, program intensity, funding, and state mandates. Table I illustrates the forms of dual credit delivery models currently offered in BC, and their delivery methods and results and the following section discusses target population in more detail.

Table 1. Forms of Dual Credit

Dual Credit Model	Description	Delivery	Result
Dual Credit	Students enroll simultaneously in high school and a PSI, and earn both high school and post-secondary credit for the same course.	Courses can be offered at high school or PSIs. Can be taught by high school or post-secondary instructors, or in combination. Must include an agreement between high school/school district and post-secondary institution. High school students need permission of principal to attend.	Students have a post-secondary transcript, and have post-secondary course/s noted on their secondary transcript as elective credit towards graduation requirements.
Dual Enrolment (Also known as concurrent admission)	Students enroll simultaneously in high school and a PSI.	Courses are offered at a PSI by post-secondary faculty.	Students have a post-secondary transcript but do not receive secondary credit for the course taken at the PSI, unless agreed to by the school.
Educational acceleration, accelerated entry	Students take higher level and more challenging content earlier in their education, i.e., higher than the common expectations for their age group or grade level.	Courses can be offered at high school or PSIs and can be taught by high school or post-secondary instructors or a combination. AP and IB courses are considered accelerated programs; delivered in high schools and taught by high school teachers	Credit can be granted simultaneously at high school and PSI, or post-secondary credit may be delayed until students enroll in a post-secondary institution (see Credit in Escrow).
Credit in Escrow (Also known as non-simultaneous dual credit)	Students take courses in high school that gain credit in post-secondary education sometime in the future.	Students take post-secondary level content while still in high school. Content is delivered by high school teachers. Programs include, Advanced Placement and International Baccalaureate.	Credit or course exemption for AP/IB courses is determined by the PSI during the admission process.
Early or middle college high schools. Also known as school-within-a-college programs.	Combination of secondary and PSIs and courses. In BC, the Career Technical Centres (CTC) combine secondary and post-secondary courses in trades, technical, and vocational areas on the same campus.	A mixture of high school and post-secondary courses delivered on the same campus, not necessarily either the PSI or high school campus. Course delivery can be by post-secondary faculty or a combination of high school teachers and post-secondary faculty.	Students receive both high school and post-secondary credit. In CTCs, students earn both a secondary diploma and course credit toward a post-secondary certificate in a trade or technological area.

Target Groups for Dual Credit Programs

Examining dual credit by target group is an effective means of distinguishing between BC's policy and practice and that of other jurisdictions. Karp et al. note that, as of the early 2000's, 11 US states identified a target population for their dual credit policies. Ten of the eleven target populations were "Enrichment" or "Advanced Students"; while Florida also identified "Technical Students" and Vermont only identified "Technical Students" (2004, p. 3). This emphasis on advanced students is consistent with the traditional purpose of dual credit, i.e., to meet the needs of academically able students. In comparison, the provinces of BC and Alberta have traditionally emphasized dual credit programs for career-oriented students, although a number of opportunities for other learning pathways/program areas and for high achieving students as defined in this paper also exist. However, recently there has been growth in the number of dual credit programs focused on at-risk students. For example, the focus in Ontario is on re-engaging disengaged students who have the potential to succeed in college but who are at risk of not graduating. The primary goal is to have more students graduate and a secondary goal is to have more students proceed to post-secondary education and/or training. This section will discuss the characteristics of programs aimed at these three target groups.

> "Arrangements that allow high school students to participate in college classes come in many forms and designs... They share important common elements of strong academics keyed to post-secondary standards, increased student engagement through interesting classes and/or attendance on a college campus, and exposure to adult expectations and milieu, and often are accompanied with supports to ensure student success" (Lerner & Brand, 2006, p. vii).

High Achieving Students

Dual credit programs have traditionally targeted high achieving secondary students, who may have already taken the most advanced courses available in their schools and are now seeking additional and more challenging course work (Edwards & Hughes, 2011; Edwards, Hughes, & Weisberg, 2012; Klopfenstein & Lively, 2012). In a survey of Canadian educational acceleration practices, Kanevsky (2011) notes that dual credit is only one of a number of forms of educational acceleration, and distinguishes between "grade-based" forms such as grade skipping or early graduation and "content-based" forms such as dual credit, AP/IB, or credit by examination--the latter being the most common forms used in BC school districts. Kanevsky (2011) claims that BC was the only Canadian province that she surveyed that had provincial policy specifically addressing education acceleration. In both Canada and the United States, the Advanced Placement Program, which was established in 1955, and the International Baccalaureate, established in 1968, provide students the opportunity to gain both secondary credit and post-secondary credit or exemption for introductory courses. Beginning in the 1970's, US post-secondary institutions began to offer their own academic courses to high achieving high school students, with credit conferred based on performance in the course

rather than on the standardized AP and IB curriculum and exams (Borden et al., 2013). Dual credit for high achieving students remains the most offered and accessed form of dual credit across North America (Kanevsky, 2011; Marken, Gray, & Lewis, 2013).

Since 1993, the University of British Columbia's (UBC) University Transition Program, although not strictly a dual credit opportunity, has provided a unique example of mixing the notion of education acceleration for academically gifted students with the early college model. UBC collaborates with the Vancouver School Board and University Hill Secondary School to offer a high school program on the UBC campus that compresses five years of secondary education into two years and allows students to graduate early and move directly into university education[3].

Career Oriented Students

A significant focus of dual credit programming in the United States, BC, and Alberta has been on preparing students for trades and technologies careers. The impetus for growth in these programs has been projected labour shortages and demand for skilled workers in a variety of fields. The assumption is that dual credit programs can help high students to focus and start on a career track while providing them with work skills and credentials that meet local employers' needs and create a regional labour pool (Watt-Malcolm, 2011). In the past, career and technical education at the high school level was considered a direct route to employment. While that is still possible in some BC industries, it is more generally accepted that all students require some post-secondary education, whether it is a short certificate program or a degree, before entering the workforce (Hughes, Rodriguez, Edwards, & Belfield, 2012). In BC, students interested in beginning a trade qualification can opt for the Accelerated Credit Enrolment in Industry Training (ACE-IT)[4] program; sponsored and funded by the Industry Training Authority (ITA). The ITA manages the BC apprenticeship system, issues trade credentials, and sets program standards for the province. In Ontario, although not targeting students with a career path in mind *per se*, the Youth Apprenticeship Program and the School College Work Initiative (SCWI)[5] serve the same purpose of providing pathways to apprenticeship, and entry into post-secondary apprenticeship and college programs. Like Ontario's *Student Success Strategy*, the *Alberta Dual Credit Strategy* has a number of goals that go well beyond providing career pathways, including engaging students; motivating them to complete high school; inspiring them to live and work in their communities; and giving them confidence to transition to post-secondary education and the workplace (Alberta Education, 2013). Alberta Education funds over 40 provincially credentialed pathways in a variety of trade and technical areas that enable students to gain dual credit towards apprenticeship training or a post-secondary credential[6]. While these programs are generally aimed at students who have a career path in mind, they can also be oriented towards low-income or disengaged students who are struggling academically and in danger of not completing secondary education or who have not considered attending post-secondary education.

At-Risk Students

Dual credit programming aimed at at-risk students is a more recent phenomenon (Philpott-Skilton, 2013), although that has been the focus of dual credit programing in Ontario since its inception. As noted above, programs and pathways like Alberta's can be focused

[3] See http://universitytransition.ubc.ca
[4] See http://www.itabc.ca/youth/educators#ace-it and http://www.itabc.ca/youth/educators#ssa
[5] See http://www.scwi.ca
[6] See http://education.alberta.ca/department/ipr/dualcredit.aspx

on students with a career path in mind as well as at-risk students. Golann & Hughes (2008) note that while dual credit has traditionally targeted high achieving students, policy makers are increasingly seeing dual credit as an effective strategy in helping a wider range of students stay in school and transition successfully to post-secondary education. For example, the American Youth Policy Forum uses the term "Secondary-Post-Secondary Learning Options" to describe the early college model of dual credit programs "serving first-generation, low-income, and low-performing students, students with disabilities, and underrepresented minorities" (Lerner & Brand, 2006, p. vii). Recently, Okanagan College announced plans for an early college program with a mission to provide a supportive and academically challenging environment for those students who could benefit from a supported transition to college, and whose goals may not include post-secondary education[7]. A number of BC institutions indicate that providing opportunities for at-risk students is one of the purposes for their dual credit programming, with the University of Northern British Columbia (UNBC) and Thompson Rivers University (TRU) specifically mentioning a focus on aiding transitions for Aboriginal youth.

Goals of Dual Credit

The goals of dual credit programs vary by jurisdiction and agency with support for transitions to post-secondary education a major theme in the literature and also found in the policy documents of BC, Alberta, Ontario, and many states in the US. In its widest sense, dual credit aims to create a post-secondary-bound, post-secondary-ready culture (Cravey, 2013) through exposure to post-secondary social environments and work standards in a low-risk and low-cost manner (Borden et al., 2013). Exposure to post-secondary culture is more likely if students are taking courses offered on the post-secondary campus and delivered by post-secondary faculty. While AP and IB programs may expose students to post-secondary level content and rigour, they do not allow secondary students to experience the higher education social milieu, or other aspects of higher education. Todd (2013) distinguishes between readiness for post-secondary in terms of cognitive variables (such as grades and admissions requirements) and non-cognitive readiness variables such as "commitment to education, self- and resource-management skills, interpersonal and social skills, academic success skills, and career planning skills" (p. 708). Dual credit can assist first-generation students or students without a reference point for

"Ryan Gilmore was frustrated with high school and considered dropping out. Then he learned of the dual credit programs offered by the Northern Opportunities initiative and signed on to train as an automotive service technician while still in high school. Now he's graduating with the highest mark in his course" (Northern Business, 2012).

[7] See http://www.okanagan.bc.ca/BecomeaStudent/Transitions.html

successful post-secondary admission and completion within their family or peer group to see themselves as capable of success in post-secondary education (Edwards et al., 2012). Dual credit programs provide opportunities for post-secondary institutions and high schools to discuss readiness standards and curriculum alignment, and to collaborate on student services that better support students in making the transition (CCRC, 2012).

Traditionally dual credit, including AP and IB was seen as a program for high achieving students. Interestingly, Holstead, Spradlin, McGillivray, & Burroughs' (2010) survey of US AP teachers indicates that the majority believe that the growth in AP programs in the US is more likely driven by students interest in saving money and improving their chances of university acceptance rather than by the opportunity to take challenging academic coursework. Of course these interests are not mutually exclusive.

Community outreach, student retention and success are also important goals for dual credit. Cassidy et al. (2010) in their review of dual credit implementation for the US Department of Education, mention that dual credit programs enhance the ability of post-secondary institutions to gain positive publicity regarding the institution's commitment to the community. Many jurisdictions see dual credit as a means to improve student retention, secondary/post-secondary credential completion, or PSI or work transition rates. A report by the Higher Learning Commission on dual credit in the US notes enhanced student success and shortened time to a degree as among the primary objectives of dual credit programming (Borden et al., 2013). High school completion features widely in the US literature on the topic as an important purpose of dual credit programming and was also mentioned by a number of colleges and BCIT as a likely reason that dual credit programs would appeal to BC students. Motivating students to finish secondary school is one of the four elements of Alberta's *Provincial Dual Credit Strategy* and was identified by Philpott-Skilton (2013) as one of the original motivations for Ontario's dual credit policy. From another perspective, dual credit can be seen as a means of enabling efficient credential completion at both levels, as students are able to begin work on a post-secondary credential while gaining credits towards high school graduation.

The literature identifies student engagement with their learning as a separate purpose for offering dual credit programming, although it is related to transitions, success, and retention. Students see the opportunity to gather post-secondary credits and interact with older peers as more engaging than continuing in high school (Edwards, Hughes, & Weisberg, 2011). Watt-Malcolm (2011) notes that, from the school district perspective, the potential for student engagement may be a more important purpose for students and the school than the goal of accumulating credits toward a credential.

One of the purposes of dual credit identified by Borden et al. (2013) in their review of the literature was to "introduce more diverse and challenging courses into the high school curriculum [and to] . . . broaden academic opportunities and course options for high school students" (p.6). Brown, Lerner, & Brand's observation that some school districts use dual enrollment to provide additional classes, "when there may not be enough students at any one school to justify a particular course offering" (2006, p. xi) is especially relevant for rural institutions with a number of small satellite campuses.

These goals of dual credit programming were identified in the surveys and interviews and are explored in more detail in the section on British Columbia which follows. The breadth of purposes and goals and the range of target learners suggest the difficulty of policy development in this area and indicate that perhaps enabling policy and institutional autonomy are key elements for effective support for this kind of programming.

Policy and Practice

in Alberta, Ontario, the United States, and British Columbia

This section summarizes policy and practice in three Canadian provinces and the United States. The provinces are similar in that provincial dual credit policy is found in Ministry of Education documents although this type of programming has implications for other ministries such as advanced education, or ministries/agencies responsible for skills, jobs, or training as well as for autonomous post-secondary institutions. Individual post-secondary institutional websites often contain information about dual credit policy or opportunities, although in Alberta and Ontario this is more likely in the college than the university sector, while in BC almost all public institutions mention dual credit opportunities and procedures. Dual credit policy in the three provinces tends to focus on support for career-oriented students and student transitions in general while US states have a wider set of policy objectives, perhaps based on a more diverse student body than is found in Canada. Information on US policy is found in a number of sources including national educational agencies, enabling a more comprehensive comparison of state policies and practices, which is not possible in Canada given that education is a provincial responsibility and there is no coordinating national education ministry.

Alberta

Alberta's dual credit policy is outlined in the *Provincial Dual Credit Strategy: Call to Action* (2013). The policy's purpose is to increase high school retention and completion, increase participation in post-secondary education, connect students to the labour market, and expand local partnerships (Alberta Education, 2013). The *Strategy* notes that "dual credit programming may offer more engaging opportunities to a broad range of students, including First Nations, Metis, and Inuit students, those living in remote or rural communities, and those who may be at-risk of dropping out" (p 1). Furthermore, the *Strategy* is intended to create more opportunities for students to earn credits in high school and post-secondary institutions at the same time, as well as opportunities for preferred placement (post-secondary course exemption) and workplace certification.

Prior to the implementation of the *Strategy*, the Province funded a number of dual credit pilot projects and encouraged individual institutions to create agreements. The dual credit initiative is part of a larger provincial strategy to enhance credentialed pathways and regional partnerships, as well as support for other forms of learner pathways and sharing of appropriate resources and curriculum mapping. The Alberta Government (Education, Innovation and Advanced Education, and Human Services) has committed more than $11 million over three years (2013-16) to the *Strategy,* which includes $5.35 million to help expand the number of dual credit opportunities to students across the province. The funding envelope, to be dispersed in up to $150,000 grants over three years, has been allocated to support partnership agreements between schools, publicly funded post-secondary institutions, and business and industry. Dual credit opportunities offered through these partnerships can include courses or programs leading to completion of a recognized program, such as level one of an apprenticeship or a Health Care Aide certificate, and can include academic, Career and Technology Studies (CTS), and locally developed high school courses[8]. Given the partnership requirement and goals for *Strategy* funding, some learner pathways, including AP/IB, are not eligible at this time, although individual institutions offer credit for completion of AP/IB coursework.

[8] See http://www.albertadualcredit.ca

Strategy funding for dual credit opportunities is based on a one-time only competitive application process intended to support development of sustainable dual credit courses/programs for students. A Provincial Dual Credit Steering Committee, an arms-length decision-making body representing school authorities, post-secondary, and business and industry, was approved by the government to lead the Strategy application process and inform the future direction of dual credit in Alberta. The College of Alberta School Superintendents (CASS) is also a partner in this process, administrating the application process. Successful applicants had to demonstrate how they were allocating already available funding, including high school and PSI funding, as a part of the application and grant process.

With the application process now completed, *Strategy* partnership grants are planned for approximately 51 dual credit opportunities to date in the areas of agriculture, business and entrepreneurship, information technology, esthetics, natural resources and environmental science, oil and gas, tourism and hospitality, health care aide, athletic development and health sciences, 5th class power engineering, production field operator, and various trades (e.g., cosmetology, carpentry, welding, electrical, and automotive). Over half of these opportunities are for career oriented programs that are a part of credentialed pathways and aligned with Alberta's Career and Technology Studies clusters, which are organized in the five general areas of Business, Health and Human Services, Communications, Natural Resources, and Trades. The *Strategy* also supports the development of up to a total of 20 new credentialed pathways, which can lead to credit or credentials from community, post-secondary, or industry[9].

Dual credit opportunities have been available in Alberta for a number of years prior to the *Strategy*. Under Section 49 of the *School Act*, students cannot be charged tuition fees for high school or dual credit courses (Province of Alberta, 2014). Tuition fees and other costs are negotiated between the school/district and the post-secondary institution. High schools may direct their credit enrolment unit (CEU) funding toward courses offered by a publicly funded post-secondary institution[10] as long as this funding is also directly supporting a students' high school education. Alberta Education is currently working on developing a plan for a lifelong learning transcript anchored by the Alberta Student Number. The transcript would include program-level identifiers for secondary, post-secondary, and dual credit completion. Future dual credit opportunities for students may also be impacted by the 2015 implementation of the new *Education Act*, which will allow students to receive high school funding up to age 21. A high number of Alberta post-secondary institutions have also been identifying dual credit coordinators and have begun meeting regularly to collaborate, share resources on albertadualcredit.ca, and discuss ways to address common issues. A grassroots post-secondary dual credit coordinators committee consisting of post-secondary institutions and their secondary partners has been meeting on a regular basis over the past year to share and provide advice to the system on successful practice and is in the midst of discussions regarding potentially becoming a Dual Credit Articulation Committee.

Ontario

The broad framework for Ontario's policy on dual credit is found in the pathways section of *Creating Pathways to Success: An Education and Career/Life Planning*

[9] See http://education.alberta.ca/teachers/program/cts.aspx and http://education.alberta.ca/media/8815976/cts%20pathways%20credentials%20feb-2014.pdf

[10] See http://www.albertadualcredit.ca/faqs

Program for Ontario Schools, Policy and Program Requirements, Kindergarten to Grade 12, 2013. The document identifies four programs with a pathway focus: dual credit, Ontario Youth Apprenticeship (OYAP), Specialist High Skills Majors (SHSM), and school-work transition programs. Specific dual credit policy is outlined in *Dual Credit Programs: Policy and Program Requirements* (2013b), which describes guiding principles, possible program delivery approaches and models, transcription processes, general funding arrangements, assessment and reporting processes, and admissions criteria.

Pathways to college and employment such as those in the School/College/Work/Initiative (SCWI) have been in place in Ontario since the late 1990s. Dual credit programs were introduced in 2005 as part of the Ministry's *Student Success Strategy*, the purpose of which is to assist students to complete their high school diploma and make successful transitions to college or apprenticeship. The overarching goal of the strategy was to increase secondary graduation to 85%. All 70 school boards that have secondary schools and all 24 Ontario colleges of applied arts and technology are involved in providing secondary school students with dual credit learning opportunities. Programs can be delivered in a variety of ways including:

- college-delivered courses or level 1 apprenticeship training;
- team-teaching of matched secondary and post-secondary curriculum by college and high school teachers in both academic and apprenticeship courses;
- Level 1 training delivered at a high school with college oversight; and
- a school-within-a-college (SWAC) model with the courses for each sector taught by their respective staff. The SWAC program was developed as an intensive pathway for disengaged or under achieving high school students who have the potential to succeed but are at risk of not graduating, and students who have left school before graduating (Ontario Ministry of Education, 2013b).

Courses in these delivery models may be offered to integrated secondary and post-secondary cohorts or to sections of secondary students only. Students require 30 credits to graduate, of which 18 consist of compulsory credits and 12 are optional. Students can earn four of the 12 optional credits through college-delivered dual credit courses. They can also gain an unlimited number of both optional and compulsory credits if the courses they are taking are team taught by high school and post-secondary instructors.

Much of the Canadian research and resources on the topic of dual credit programming emanates from Ontario. The Ministry of Education produces a number of policy documents and resources for schools and districts. For example, the dual credit student data report for the 2011-12 school year provides data on participant numbers, completion rates, success rates, and lessons learned. It notes that 411 programs were in place serving 15,961 students, representing a 31% increase in the number of students over the previous year. The highest proportion of dual credit courses (64.2%) were those delivered on a college campus by college faculty. Students in Specialist High Skills Major (SHSM)[11] and youth apprenticeship programs are eligible to participate in dual credit and in 2011-12, 2,871 or 17% of dual credit students were also registered in a SHSM program and 830 or 5% were also registered as apprentices (Ontario Ministry of Education, 2013c). Data collected indicates that dual credit students who apply for college after participation in the program are much more likely than the general applicant population to actually register in a college program (Ontario Ministry of Education, 2013c).

[11] See http://www.edu.gov.on.ca/morestudentsuccess/SHSM.asp

A recent study examined the educational outcomes of students who participated in the Dual Credit and SWAC program at George Brown College in 2012. The study reported that the programs are effective strategies for helping students access and ease their transition into post-secondary education, accumulate credits, and improve academic performance (Community Partnerships Office and Academic & Student Affairs Special Research & Evaluation Project, George Brown College, 2014). This study referenced other research on student attitudes and opinions at Humber College, Fleming College, St. Lawrence College, and George Brown College but noted a general lack of information on academic and post-secondary trajectories and transition outcomes for dual credit students.

United States

A variety of dual credit policies have been in place across the United States for three decades, starting with opportunities for high achievers and followed by growth of career oriented programming and more lately by programs targeted toward at-risk, disadvantaged, and groups underrepresented in higher education. A policy brief on dual credit produced for the Education Commission of the States notes that states create programs for a number of reasons including: fostering relationships between institutions, enhancing efficiency of both systems, implementing rigorous preparatory curriculum, increasing credential completion rates, and reducing the need for remediation (Krueger, 2006). Dual credit is seen as a means to improve post-secondary participation and preparation and is considered to be effective in increasing academic performance, the likelihood of graduation, and reducing the time to credential completion, although funding, eligibility, tuition, and program structure vary from state to state (Krueger, 2006). The US Office of Vocational and Adult Education reports that 47 of the 50 states have dual credit policies in place, and notes that these policies vary according to the comprehensiveness of the policy and to the extent to which it addresses funding, participation, venue for course offerings, instructor qualifications, mixture of student types, number and type of courses to be offered, and the credit gained (US Department of Education, 2014). In general, states have more interest in overseeing the financial aspects of dual credit and determining which students can participate and leave the specifics of the programs to the institutions (Edwards et al., 2012). However, due in part to fiscal constraints, they are also moving towards more structured policies and providing more guidance and regulation (Karp, Hughes, & Cormier, 2012).

In 2002-03, about five percent of all students in the US took post-secondary courses while enrolled in secondary school with Texas enrolling six percent and Washington State enrolling nine percent of the total high school population (Krueger, 2006). In 2010-11, roughly 1.3 million US students took classes for university credit before completing high school, an increase of 67% since 2003, according to the US Department of Education (Marken, Gray, & Lewis, 2013). While the numbers of total students accessing dual credit courses may be limited, the percentage of high schools and post-secondary institutions that provide the opportunity is considerable. The US Department of Education reports that high school students took courses for post-secondary credit in 53 percent of all US post-secondary institutions in the 2010-11 academic year, whether in a formal dual credit program or not (Marken et al., 2013) and a US National Center for Educational Statistics (NCES) report indicates that 98% of public two-year institutions had secondary students taking courses for credit (2005). The major focus of US dual credit continues to be on high achieving students with the vast majority of high schools that offer dual credit, doing so in academic areas. (Cassidy, Keating, & Young, 2010).

A change in focus of dual credit programming is the increasing emphasis on at-risk students and students from underrepresented groups entering higher education. A 2005 National Center for Educational Statistics (NCES) report indicates institutions that offer dual credit may also target students at risk of academic failure. The report noted that 14% of public two-year institutions, or two percent of all institutions, had a formal dual credit program specifically oriented toward high school students at risk of educational failure. A specific form of dual credit that focusses on at-risk students is early college, which is a combination of secondary and post-secondary programming on the same campus, often on or near an existing post-secondary campus. The Early College High School Initiative funded by the Bill & Melinda Gates Foundation started or redesigned early college programs in over 280 schools in 30 states beginning in 2002 (Jobs for the Future, 2014). The key elements of this type of dual credit are noted on the Jobs for the Future (JFF) website as: aligned curricula and instruction, personalization and student support, campus placement, dual credit, free tuition, and partnerships. These schools are focused on supporting struggling students from low-income and minority families (JFF, 2014).

The literature suggests that practice of offering dual credit programs and courses has a positive relationship to improving post-secondary preparation and participation, increasing credential completion, and reducing post-secondary remediation (Krueger, 2006). A report by the American Institutes for Research (AIR) on the Early College High School Initiative indicates that students taking college-level courses in high school are more likely to go on to PSE and to complete a credential than their peers who don't participate in such a program (Berger, Turk-Bicakci, Garet, Knudson, & Hoshen, 2014). The Community College Research Center of Columbia University (CCRC), quoting statewide research in Florida, indicates that students taking courses on the college campus rather than on a high school site have higher rates of post-secondary enrolment and degree completion (p. 5). The CCRC (2012) reported on studies in three states that find that dual credit enrolment is positively related to a range of benefits including college enrolment and persistence, greater credit accumulation, and higher GPA. Golann and Hughes (2008) summarize the benefits of dual credit programs as providing increased rigour in secondary curriculum; support for low-performing students in reaching high academic standards; availability of more secondary course electives; reduction in dropout rates and increased student aspirations; improved student acclimation to the post-secondary environment; and cost reduction for students.

> "Much of the policy interest in dual enrollment programs emerges from a conviction that such programs can help strengthen preparation for college, the transition into college and success in college for a broad range of students" (Golann & Hughes, 2008, p. 9).

Cassidy et al. (2010) conclude that while research on the effectiveness of dual credit is still fairly limited, initial findings suggest dual credit can increase high school graduation rates, post-secondary enrollment and persistence, and high school students' interest in school, as well as decreasing the costs and time to complete a credential.

British Columbia

BC's policy includes a number of rationales for offering dual credit, the most general of which is to help students make smooth transitions to further education and training (BC Ministry of Education, 2005). The BC Ministry of Education (MOE) dual credit policy describes how courses will be noted on secondary transcripts, the types of post-secondary courses that can be granted dual credit, funding parameters, and secondary institutional participation. Other elements such as venue, cost sharing, student eligibility, program structure, and instructor qualifications, are left to agreements worked out between secondary and post-secondary institutions.

The 2005 BC policy, *Recognition of Post-secondary Transitions Programs for Funding Purposes* notes, "Secondary schools are not always able to offer the full range of courses or programs that help prepare students for specific occupations", and encourages districts to collaborate with post-secondary institutions and industry to offer "transition programs that lead to trades certification or post-secondary credentials". A related policy document states, "Students learn in a variety of ways, some of which take place . . . outside of the regular secondary school program" (BC Ministry of Education, 2004). While support for career oriented students is explicit through the ACE-IT program, provincial policy does not refer to specific opportunities or programs to support high achieving, at-risk, underrepresented, or students from low economic status backgrounds. MOE policy does not explicitly reference education acceleration other than to note that, "Schools will grant credit towards graduation for learning that has been assessed and matches or exceeds provincial, national or international standards" (Ministry of Education, 2004).

The Ministry has supported dual credit career oriented pathways for close to two decades. In 1996, the MOE gave students the opportunity to gain post-secondary credits in specific areas such as First Nations studies, horticulture, and American Sign Language[12]. In the late 1990s and early 2000s, the Ministry of Advanced Education funded several projects including an Auto Collision program that allowed students in Burnaby and Vancouver school districts to access training at Vancouver Community College (VCC) and get credit towards high school, college, and the first year of apprenticeship[13]. Recently the BC government has committed to expanding dual credit opportunities (Province of British Columbia, 2014c).

Graduation from a BC secondary school requires students to complete 80 credits, consisting of 48 credits from required courses, 28 credits from elective courses, and four credits from Graduation Transitions. Generally, the Graduation Program courses are four credits each. Of the 80 credits, 16 must be at the Grade 12 level, including a Grade 12 Language Arts course. All K-12 courses offered in BC are listed in the online Course Registry[14]. The Registry lists all of the dual credit courses offered by post-secondary institutions, whether academic, trade, or technical—although only by PSI title--as well as all AP and IB courses. BC students can gain any number of credits for graduation through dual credit under provincial policy although in practice, schools generally limit the number of courses their students can register in at a PSI.

The MOE will provide funding to school districts for courses delivered to high school students by post-secondary institutions if:

[12] See http://www2.news.gov.bc.ca/archive/pre2001/1999/2231.asp
[13] See http://www2.news.gov.bc.ca/archive/2001-2005/2003mae0039-000857-attachment1.pdf
[14] See http://www.bced.gov.bc.ca/datacollections/course_registry_web_search/search-home.en.php

- they lead to a post-secondary credential (and appear on a post-secondary transcript) from a BC Transfer System member institution, a credential offered in French through the Educacentre, or a credential offered by an ITA certified Youth Program training provider;
- they are part of a school district program that is an education option for students;
- the school district pays the tuition costs for the post-secondary courses reported to the Ministry for funding;
- the school district has a current agreement with the post-secondary partner;
- students begin taking the post-secondary courses during their Grade 11 or Grade 12 year;
- dual credit students annually update and sign a planned program of courses; and
- the courses are reported for Graduation Program credit to the Ministry transcript system (BC Ministry of Education, 2004).

Accelerated Credit Enrolment in Industry Training (ACE-IT)

A considerable portion of dual credit enrolment is in the ACE-IT program, the purpose of which is to start students into apprenticeship. ITA provides funding to school districts based on documentation provided that indicates numbers of students participating (ITA, 2014).

The ACE-IT program has three funding models:

1. Technical training is delivered entirely at the post-secondary institution, usually to cohorts of mixed secondary and post-secondary students. The school district pays for tuition from the ITA funding allotment, and occasionally there is a top-up from the district.
2. Technical training is delivered through a partnership between the PSI and the school/school district, usually to classes of high school students. Classes may be delivered at either a high school or the PSI or both and could be taught by a post-secondary instructor, a teacher with Red Seal qualification, or both. The school district and PSI share the costs of training.
3. The school district is an ITA-designated private trainer and receives the training allotment from ITA.

The ITA covers the seat costs for post-secondary institutions providing technical training for ACE-IT students. The 14 PSIs offering trades training submit training plans to ITA and indicate the levels of training to be offered including ACE-IT.

Post-secondary and school district respondents and a number of trades articulation committees indicated that the ACE-IT program is an excellent means to start secondary students on a trades career path and strongly supported its continuation. However, an internal ITA review of dual credit programming indicates that pass, withdrawal, and failure rates for ACE-IT students should be improved. There was an overall pass rate of 63% for all students in the program between 2009 and 2011 and some high-demand trades such as Automotive Refinishing Prep Technician, Automotive Service Technician, Hairstylist, and Professional Cook 1 had low pass rates, high withdrawal rates, and in some cases, high failure rates (ITA, 2013). In moving forward, the review identified a number of elements that influence success of ACE-IT programs:

- pass rates are higher in post-secondary only locations, followed closely by hybrid delivery;

- access to seats in post-secondary programs vary; some districts find access to high demand programs to be difficult, even though most post-secondary institutions reserve seats for ACE-IT students;
- courses that blended high school and post-secondary students tended to have higher pass rates and many PSIs limit the number of high school students to no more than half the class;
- pass rates in courses offered on secondary school campuses are higher when instruction is from both secondary teachers and post-secondary instructors;
- it is difficult for secondary schools to provide up-to-date technology and maintain equipment for ACE-IT students;
- pass rates are higher when school districts deliver ACE-IT in a block of training rather than part time;
- withdrawal rates can be reduced when students are carefully screened for interest in and aptitude for the chosen trade;
- withdrawal rates can be reduced when student supports are in place, including such elements as monitoring absenteeism, performance, and behaviour, reporting to parents and career staff, and examination preparation (Industry Training Authority, 2013).

ITA respondents indicate that the continuation rates (i.e., continuing on to complete an apprenticeship) for ACE-IT students are a critical measure of success and have noted the low rates of continuation for students enrolled only in ACE-IT in comparison those who are enrolled in both Secondary School Apprenticeship (SSA) and ACE-IT. Students enrolled in both programs have a continuation rate close to the adult population of around 50%.

Dual Credit Enrolment

The types of dual credit courses enrolled in varies by school and post-secondary across the province with some schools and districts emphasizing academic post-secondary opportunities while others emphasizing career options. Table 2 lists the head count of students taking dual credit courses at PSIs including ACE-IT and academic, trades, and technical courses taken. AP/IB courses are not included. Overall dual credit enrolments and completions increased by 43% between 2007/08 and 2011/12 (Ministry of Education, 2014d) with ACE-IT completions increasing by approximately 24% over the same period (MOE, 2014b). A course completion report for BC public and

Discussions at articulation committee meetings and with district staff indicate that some schools/school districts see the ACE-IT program as an opportunity to help students graduate by providing more hands-on learning, engaging them more in their education, or helping them discover whether they would like to proceed in a trade. These purposes are as important to the school as ensuring that students continue in the trade.

independent schools provided by the MOE indicates that 51 of 60 school districts registered students in ACE-IT, and that 2,172 students completed the program in the 2013/14 school year (MOE, 2014a). Surrey, the largest district in the province by population, had the largest number of completers at 159 with Central Okanagan close with 157. A list of school districts and ACE-IT completers is attached as Appendix III. In 2013, the most subscribed ACE-IT trade areas included Carpenter (375 completers), Professional Cook I (304), Electrician (247), and Hairstylist/Cosmetologist (241). A summary of the ACE-IT Completion Report is attached as Appendix IV. Table 2 indicates significant fluctuations in numbers as some schools, districts, and post-secondary institutions report substantial increases in numbers over the five year reporting period while others report equally substantial decreases. The interviews with school district and post-secondary personnel did not yield much information as to why these fluctuations might occur, although the role of principals and counselors in advertising dual credit opportunities and the role of the post-secondary liaison in coordinating programs seems to have a significant impact on enrolments year over year.

In preparing this report, a number of data issues were identified that the MOE is in the process of addressing. Dual credit courses are listed in the Ministry course registry with a course code that starts with the letters 'PSI', contains two characters identifying the post-secondary institution, two digits to identify the level of the course, and one character to uniquely distinguish the specific course taken by the student. For example, the course code "PSIAA12A" identifies the first post-secondary course taken by a high school student at Trinity Western University. However, this naming convention does not distinguish between ACE-IT and other dual credit courses or identify the discipline. Students may take dual credit courses at different post-secondary institutions in the same year resulting in accurate reporting of post-secondary dual credit course enrolments but double counting of individuals. Students, especially in ACE-IT, may take a number of courses across years at the same institution, and users who see a table showing the count of students who have taken courses at a PSI by year need to remember not to sum multiple years and report the sum as a distinct count as there would be double counting. AP/IB awards are not captured in provincial data collections as the granting of credit by PSIs is not simultaneous with attendance in secondary school (Pat McCrea, personal communication, December 12, 2014).

Table 2 (next page) indicates that, among BC post-secondary institutions, Camosun College has the highest enrolment of dual credit students. The Camosun respondent indicated that this enrolment constitutes approximately seven percent of the total Grade 12 cohort in the five South Island Partnership school districts, and that the college has a target of 20% over the next few years. Camosun enrolls more than 50% of its dual enrolment students in academic and technical courses with the remainder completing ACE-IT courses. The South Island Partnership, offers courses in eleven trades, health and human services, business, and university transfer arts and science (Reed, 2010). In the North Island Partnership of North Island College (NIC) and school districts in Port Alberni, Comox Valley, Campbell River, Vancouver Island North, and Vancouver Island West "enrolment had increased by nearly 1,000 percent to include more than five percent of grade 12s in the partner school districts" (Reed, 2010, p. 2). Burnaby school district indicated that the emphasis in their dual credit programming is ACE-IT and specific laddering programs in career areas, while the Cowichan Valley school district noted that the numbers in ACE-IT are not noteworthy but that the district has high enrolment at Vancouver Island University in academic first year courses such as English and Psychology.

Table 2. Dual Credit Completion by Post-Secondary Institution: 2007/2008-2013/2014.

Post-Secondary Institution	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	Total
BCIT	229	183	181	224	198	204	228	1,447
Camosun College	122	190	158	291	351	437	554	2,103
Capilano University	10	2	3	1		3	3	22
College of New Caledonia	196	187	165	127	129	142	92	1,038
College of the Rockies	16	52	60	68	67	62	52	377
Columbia College	7	16	16	17	10	13	14	93
Coquitlam College		2	1		3			6
Corpus Christi College			15		18	18	12	63
Douglas College	1	3	10	28	18	2		62
Educacentre	9		2	6	4			21
Emily Carr University of Art and Design		1	5	1	2		1	10
Justice Institute of BC	1	14	26	26	42	39	40	188
Kwantlen Polytechnic University.	246	245	245	267	190	192	233	1,618
Langara College	2	2	3	2	3		1	13
Nicola Valley Institute of Technology				21	17	17	18	73
North Island College	22	35	58	95	113	124	122	569
Northern Lights College	87	125	138	158	142	162	155	967
Northwest Community College	108	83	58	59	38	54	87	487
Okanagan College	100	133	167	129	189	190	191	1,099
Selkirk College	60	38	25	46	42	26	47	284
Simon Fraser University		2		3	2			7
Thompson Rivers University	126	109	130	139	158	154	151	967
Trinity Western University		1	1	1				3
University of the Fraser Valley	232	175	178	178	136	123	149	1,171
University of British Columbia	3	2	1	1	1			8
University of Northern BC		1	1		3			5
University of Victoria			1	10	26	26	19	82
Vancouver Community College	76	113	128	147	130	134	112	840
Vancouver Island University	129	150	149	133	250	289	308	1,408
Yukon College				1	1	1	1	4
Other	24	97						121
Grand Total	**1,806**	**1,961**	**1,925**	**2,179**	**2,283**	**2,412**	**2,590**	**15,156**

(BC Ministry of Education, 2014d)

Goals of Dual Credit Programming in BC

The survey of institutions and the follow-up interviews identified the following as the major goals of dual credit programming in the province. Many of these purposes overlap and vary in importance depending on the type of institution.

Preparation for Transition to Post-Secondary Education: All of the institutions that responded to the electronic survey indicated that transition and preparation for transition was one of the main purposes for their dual credit offerings. This reason was usually expressed as the overall purpose for the dual credit program. A number of the institutions that were surveyed specifically described the opportunity for at-risk students to attend post-secondary education as one of the purposes for their dual credit offerings. One of the interviewees described dual credit as "transition in training wheels", acknowledging the difficulty of many students in making the move to higher education.

A number of institutions including Kwantlen Polytechnic University (KPU), the University of the Fraser Valley (UFV), and BCIT indicated that dual credit was only one element in a broad transitions strategy that engaged local schools and school districts.

Career Paths: Support for career paths was identified as a purpose for their dual credit offerings by the BC Institute of Technology (BCIT) and all of the colleges and teaching intensive universities that responded to the survey. For those students who have chosen a career, especially in the trades, ACE-IT offers students a chance to both explore a career and to start on it while completing high school. In a number of institutions, such as Camosun College, North Island College (NIC), and Northern Lights College (NLC), other career-related programming is offered to high school students, including Health Care Assistant, Applied Business Technology, Business, or Tourism programs.

Educational Acceleration/Challenge: All but three of the institutional survey respondents indicated that providing opportunities for challenging high achieving students was a purpose for their dual credit offerings. However, in interviews they tended not to include AP or IB in their descriptions and often described post-secondary academic course offerings as opportunities to build transition to post-secondary rather than programs for high achievers, although they acknowledged that post-secondary courses were more challenging for students. Many institutions position their academic dual credit offerings as a head start or acceleration option, as indicated by names such as the TRU-Start program.

UBC is the largest receiver of AP exam scores in Canada and is the second largest receiving institution of IB transcripts in the world. In the 2014/15 school year, 1,009 UBC students received credit for AP courses and 1,023 students received credit for IB courses. In the case of IB, this represented an increase of 208 over the 2012/13 school year. UBC also accepts the General Certificate of Education (GCE) and the French Baccalaureate for placement or credit although on a case-by-case basis[15]. TRU posts the IB, AP, and A-Level GCE courses and grades it will accept along with the specific credit that could be granted[16].

Cost Savings: All of the survey respondents, except for two universities, indicated that, from their perspective, students are likely to opt for dual credit in order to save on tuition costs by shortening high school and post-secondary completion times. Students can stay in their local community and begin post-secondary

[15] See http://you.ubc.ca/admissions/
[16] See http://www.tru.ca/admissions/hs-students.html

coursework without the cost of tuition and potential relocation to another centre. Camosun College lists the college programs available to dual credit students in its Lync Program along with the domestic and international student tuition and other costs[17], clearly indicating that the potential savings on tuition are considerable. Kwantlen Polytechnic University (KPU), in advertising for its *On-Campus* program with Surrey schools and the *XCEL* Program with Langley schools, lists the benefits as being "free tuition and a waiver of the application fee"[18].

Recruitment Strategy/ Enrolment Mechanism: Recruitment and enrolment as reasons for offering dual credit programs was suggested by a number of different types of PSIs. Many colleges and teaching intensive universities see the ACE-IT program as a means of encouraging enrolment in their trades programs, and see dual credit in academic courses as a means of attracting high achieving students who might not have otherwise contemplated the institution. At the University of Victoria (UVic), engaging local high schools through the *uStart* program is a good means of early exposure to and potential recruitment of high achieving students who have yet to make a university choice. A number of respondents in rural areas of the province noted that the numbers of secondary students anticipated over the next few years is static or declining, and dual credit is seen as a tool to recruit students in both the trades and academic areas. Dual credit allows a post-secondary institution to enroll students in its catchment area while those students are still in high school. This ensures a smooth transition into later studies and creates, "a seamless transition from secondary to post-secondary on to a career" in the words of the Northern Lights College respondent.

Goodwill/Community Outreach: A number of institutions described a purpose of their dual credit programming as "a good will gesture", "giving back to the local school district's students", "building awareness", "a service to meet local demand", and "an opportunity to work with schools and industry in our catchment area". In general, respondents discussed the need to create partnerships with local schools and school districts, sometimes in relation to recruitment or enrolment strategy but also in terms of community outreach or engagement.

Educational Choice: Dual credit can increase course choices for a variety of students in a number of settings. BC colleges and teaching intensive universities with multiple campuses note that they can share facilities and offer programming to both adults and high school students in the community. For example, College of the Rockies (COTR) indicates that few high schools in its catchment area have the facilities to offer trades programs and thus dual credit creates opportunities that otherwise would not exist.

Another way of looking at academic dual credit and AP/IB is through the lens of educational choice. AP courses are offered at 160 schools across the province and over 9,000 students wrote exams in 32 different subjects in 2013[19]. Although many AP and IB courses replicate those currently offered in secondary schools, there are a number that are not, providing increased program choice within the high school setting. In addition, many post-secondary institutions see the opportunity of offering first-year academic post-secondary courses as widening the choice available to high school students, especially in subjects not on the list of secondary teachable majors such as Psychology, Economics, Anthropology, Sociology, or Criminology.

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[17] See http://camosun.ca/learn/lync/programs-courses.html
[18] See http://www.kpu.ca/dualcredit/on-campus and http://www.kpu.ca/dualcredit/xcel
[19] See http://media.collegeboard.com/digitalServices/pdf/ap/ap-canada/Canada_Summary.pdf

A number of institutions report that they consult with local high school teachers and counselors regarding courses likely to be popular as dual credit, and attempt to schedule the courses at the most convenient times for secondary students.

Engagement: All but one of the survey respondents indicated that they thought greater student engagement in their learning might be a reason that students would opt for dual credit courses. It is possible for students in the BC education system to finish most of their graduation requirements during their Grade 11 year, leaving considerable room in their Grade 12 timetable for electives. Dual credit may offer a curriculum alternative for students who are ready to meet the rigorous demands of post-secondary study.

Issues

The literature identifies a number of issues affecting the implementation and maintenance of dual credit programming. Krueger (2006) outlines the policy issues of collaboration across the secondary and post-secondary systems, funding, equity in access, standards, articulation, and communications with the public regarding the availability of programs. Philpott-Skilton (2013) notes similar issues and adds those related to tracking students and measuring success, and scheduling and registration. In her review of BC and Ontario dual credit, Watt-Malcom (2011) focusses on issues of quality of teaching and content, scheduling, and partnerships while suggesting that issues are more likely to be found in academic dual credit practices than in implementation of dual credit in trades areas. The issues that emerged from the BC interviews and survey responses are: communications; operational issues; funding; research; students; organizational capacity; purpose; and quality, with the biggest departure from the literature being issues related to articulation and transfer as those were not acknowledged as issues by respondents. Survey responses did not identify any one issue as more important than others, but suggested that there were a number of challenges that equally affect the success of dual credit programming. As the BCIT respondent noted, “Communication between the school district and the PSI is critical. Having a good fit between instructors and students as well as funding is critical. Space and timetabling, equipment, etc at PSI, streamlining bureaucracy--it’s all important”. This section examines the issues raised by the BC respondents in more detail.

Communication

A number of respondents raised concerns that could be generally described as communication issues including communications across the sectors, awareness of policies and programs, and understanding of the benefits of dual credit. Many institutions noted the need to have coordinators, even on a part-time basis, who would be responsible for dual credit programs – or, at the least, a designated liaison person at the school and district level as well as at the post-secondary institution-- and framed this coordination in terms of the need for ongoing communication between the sectors. A number of respondents stressed the need to disseminate information about dual credit agreements to all affected departments, and to ensure that students were aware of the program opportunities and expectations. Respondents also stressed the importance of knowledgeable principals and counsellors in schools, while one school district coordinator also noted the importance of district staff and school board members’ awareness and support for dual credit initiatives. The lack of understanding of provincial as well as institutional or school district dual credit policy and procedures on the part of students, parents, faculty, and staff was raised by a number of respondents, most often related to funding in academic and other non-trades areas. One institution noted the general lack of information about and understanding of dual

credit in its catchment schools, which made development and advertising of dual credit opportunities more problematic. Confusion over the role of teachers and post-secondary faculty in delivering courses to secondary students may also impact the advertising and support for dual credit opportunities. An example of the importance of good communication was one private university's observation that efforts to implement dual credit with high schools have not succeeded due to lack of understanding of the benefits.

Operational Issues

A number of interviewees identified timetabling, scheduling, term lengths, and reporting dates as operational challenges. Misalignment of yearly and daily schedules of high schools and post-secondary institutions was the issue most often raised. Even when post-secondary institutions offer dual credit courses in the late afternoon or evening to accommodate secondary students' class schedule, sporting events and games after school, as well as bus schedules, make attendance difficult for some students. Respondents noted the different finishing and starting times of high school semesters and terms, leading in some cases to a month's overlap between the time a student finishes a Grade 12 course and starts a post-secondary course. Generally, institutions seem to find means to accommodate these differences, primarily in the ACE-IT trades areas. Okanagan College, North Island College (NIC) and Camosun College, for example, have reconfigured their term dates to align with the start and finish of the local high school semesters. Some trades courses extend beyond the usual secondary end of year, and this makes reporting difficult. Filling cohorts with students was also cited as an operational challenge, especially in small districts or in college catchment areas where colleges have a number of satellite campuses. Related to this was the practice of students not staying with a program after registering for it. The BCIT respondent noted that the Institute offers its programs in a cohort-based format with small class sizes and preset courses, which makes it difficult to accommodate high school students who only want to take one or two of the courses within the program.

Funding

Funding as an issue has both student and institutional elements. From the student perspective, the amount that dual credit students are expected to pay varies by program, school district, and post-secondary institution. Some post-secondary institutions require students to only pay tuition, while others expect students to pay an application fee, as well as to pay for books, equipment, and consumables. One college interviewee noted that some programs, such as Hairdressing, require up to $1,500 worth of supplies, and students not fully committed to proceeding in the program can have invested a lot of money in it, even though the tuition cost may be covered by the school district. A number of PSIs advertise the savings on post-secondary courses that high school students can realize when taking them while in high school. However, the Northern Lights College respondent noted that dual credit enrolment tended to be lower in programs that had higher instructional and student fees and textbook costs and that these costs may be a barrier to enrolment. In addition, the benefit for the student may not be realized if the student doesn't proceed with the program.

Both secondary and post-secondary institutions raised issues related to funding for programs. This is an area that requires more research as there many variables involved, especially in the post-secondary block funding environment, including such elements as numbers of enrollees, the FTE funding rate, and the type of program.

The Northern Opportunities Partnership with Northern Lights College (NLC) and the Southern Interior

Development Trust at Selkirk College provide some examples of ways that institutions and communities can deal with funding challenges. For example, the Northern Opportunities Partnership provides support for dual credit programming through contributions from employers for student transportation, scholarships and bursaries, Skills Canada competitions, and NLC events related to skills and career development (Northern Opportunities Partnership Learning Council, 2013).

Research

Determining the success of the programs is difficult without the ability to track students moving between the secondary, apprenticeship, and post-secondary systems. A number of institutions indicated that they were not able to track conversion rates after completion of the ACE-IT program. BC does not report province-wide enrolments in the various dual credit programs.

Students

Issues related to students tended to focus on maturity levels of high school students and their commitment to the program. Two respondents also noted the low enrolment of females in trades programs. Student-related issues were more apparent when students were enrolled in programs delivered in the high school, rather than in programs delivered at the post-secondary institution. A number of respondents noted the need to prepare students for the expectations of post-secondary education, including class attendance, timely completion of work, and using safe work practices. One school district interview respondent suggested that effective dual credit programs require the post-secondary instructor to notify the school personnel if students were not on time, not doing homework, or not passing tests - something they would not do for their own students. Generally, post-secondary institutions have less prescriptive policies on student conduct outside the classroom, which may be problematic from the perspective of secondary educators who have a more explicit role as guardian of their students. These issues could be related to student selection for the program.

Organizational Capacity

The issue of organizational capacity is largely an issue at smaller institutions, which sometimes cannot offer courses to high school students because shops or instructors are not available. In some cases, post-secondary trades programs are oversubscribed, and seats are not available for secondary school students in spite of an agreement being in place. Capacity was mentioned in relation to a number of high enrolment trades programs such as Heavy Duty Mechanic where demand exceeds space.

Purpose and Program

Respondents from school districts and PSI's indicate that there can be quite different motivations and expectations for dual credit programs. For example, a high school might see ACE-IT as an opportunity for students to explore a trade and/or be more engaged in learning, but the measurement of the program by ITA, the funding agency, may be based on the number of students who progress to complete an apprenticeship. Where dual credit or secondary to post-secondary programming is not explicitly described in institutional plans, there may be a mismatch between the stated aims of the program and its results.

Quality

The literature describes issues of quality relating to level of difficulty, consistency across programs, and instructor preparation and qualification (Lowe, 2010). Only two of the institutions responding to the survey identified quality as a concern in dual credit program-

ming and did so in relation to post-secondary faculty teaching cohorts of high school students and high school teachers teaching post-secondary level courses within the high school setting. High school teachers may not be able to define for their students the standards or working environment required in post-secondary courses, while post-secondary instructors may be unfamiliar with the supports usually offered at the high school level, engagement and classroom management techniques, or high school student expectations regarding work load.

Possible Policy and Practice Directions

The survey of BC PSI's suggested general satisfaction with the MOE policy framework for dual credit with some concerns raised. The issues raised by respondents ranged from purely operational issues such as how to encourage ongoing communication or bring into line schedules and timetables to wider policy questions such as what should be included in 'transitions' policy, how to align learning outcomes at the secondary exit and post-secondary entrance levels, and how to encourage long-term successful collaboration between the systems. The literature on dual credit and practice across North America suggests some policy directions that may be worthy of further discussion. Four of these directions, discussed below, are transitions, alignment, partnerships, and research.

Transitions

A number of school districts and post-secondary institutions indicated that they viewed dual credit as only one element of a wider transitions strategy. For example, BCIT provided the author with a list of its school district partnership programs, which included dual credit programs, pathways, laddering opportunities, and awards. Similarly, UFV offers summer camps in science and philosophy to elementary students, a Fashion Design camp and History in Film contest, as well as dual credit and concurrent enrolment opportunities for secondary students. On the secondary side, Burnaby school district examines opportunities for students to transition to specific programs such as Hotel Management or Computer Technician by negotiating dual credit, laddering, or preferred entry and seating arrangements where appropriate with local PSIs such as SFU, Douglas College, and BCIT. The school district, in consultation with a PSI, tailors elective course offerings to what is required for post-secondary suc-

> "Currently, the assumption of most dual enrollment advocates is that dual enrollment is attractive because it is an escape from high school, rather than an enhancement of the high school experience. Reframing dual enrollment as a key platform for high school success alters that equation. It embeds dual enrollment in the larger agenda of constructing a seamless transition to postsecondary education—an agenda that requires collaboration across secondary and postsecondary sectors and changes both" (Hoffman, 2005 p.11).

cess, making effective transitions much more likely. In a recent submission to the provincial government, BC Colleges provided some interesting suggestions for dual credit. It called for a BC Colleges Transition Strategy that would, among other things, develop a transition pilot project with K-12, PSIs, and industry to transform dual credit and optimize ACE-IT programs (BC Colleges, 2014).The paper suggested that, "now is the time to invest in a province-wide framework that will encourage school districts and colleges to work together to match students with the right advanced skills and job training for the careers most in demand" (p. 3). A grassroots coordinating committee similar to the one currently operating in Alberta might aid in addressing issues of curriculum and program alignment, identification of good practice related to development of partnerships, and areas of promising research.

Alignment

A policy environment in which dual credit is proactively encouraged may present opportunities to align secondary and post-secondary expectations. Hoffman (2005) more directly suggests that dual credit itself can be a tool for aligning high school and post-secondary education. Discussions at articulation committee meetings indicate that there is a need for considerable discussion on exit outcomes of secondary schooling and entrance expectations for post-secondary courses, most notably in mathematics and English. A number of initiatives across the continent offer some interesting possibilities on this topic.

Agreement on standards at both high school and post-secondary levels is an important element. Klopfenstein & Lively (2012) note that, although AP was conceived as an educational acceleration opportunity for high school students, its popularity exists in part from concerns about low standards in the general curriculum, and this is probably also true of IB. It is worth noting that, while high school-based standardization efforts in the United States, such as the Common Core State Standards Initiative[20], have failed to gain widespread traction across the country, AP--a high-school delivered program based on first-year post-secondary courses--has gained some acceptance as both a graduating standard for high schools and a first year standard across the continent, even though there are some concerns about its depth and breadth of coverage (Holstead et al., 2010; Klopfenstein & Lively, 2012). The numbers of high school students taking and successfully completing first year courses at post-secondary institutions would seem to indicate that determining the sequence of learning from secondary into post-secondary in a common subject area like English is possible and worthwhile.

In a review of post-secondary education in Ontario, Bob Rae, the then Minister of Training, Colleges and Universities, suggested the formation of K-16 Councils that would improve the success of all students from Kindergarten through college and university, including "establishing equivalency standards for programs offered by school boards and colleges" (Rae, 2005 p. 46). This proposal is similar to the P-16 initiatives adopted by a number of US states that aim at aligning exit standards for high school and post-secondary admissions requirements[21]. Besides the P-16 initiatives, Krueger (2006) noted the efforts of states to align high school exit standards with college admission standards. One example is Washington State's "Running Start" program. Another is the "Early Assessment Program" administered by the California State University System (CSU), which aligns high school and university placement standards in English and mathematics using tests in Grade 11. Another call for national K-12 and higher education alignment in the US comes from

[20] See http://www.corestandards.org/
[21] See http://www.ecs.org/clearinghouse/24/28/2428.htm

Conley & Gaston (2013) who suggest that connecting the Common Core Standards in English and mathematics with the Degree Qualifications Profile would aid in preparing more students for college study.

Articulation committees at the post-secondary level, which work to enable effective credit transfer across the province, are active in BC and Alberta with interest from other provinces. These committees may provide the venue for better connections between high school courses and post-secondary education through work on standards and alignment within specific disciplinary areas. Articulation committees may also provide a good venue for feedback and consultation on general outcomes, content, and concepts currently being discussed as part of the revision of grades 10-12 curriculum by the Ministry of Education.

Individual institutions or regional partnerships may be able to take the lead in aligning programs and courses. For example, the University of the Fraser Valley held a one-day forum in November 2014 to discuss the use of learning outcomes and assessment in aligning K-12 and post-secondary programs that included both university and local K-12 representatives. In offering their Film and Broadcast program, the Burnaby school district worked to align the program with BCIT's program with the result that BCIT agreed to set aside seats for students completing the high school program.

Partnerships

The importance of partnerships is clear in the policy statements of BC, Alberta, and Ontario, all of which require agreements between secondary schools/school districts and post-secondary institutions as a pre-condition for students gaining dual credit, with Alberta also requiring partnership with business/industry under its *Strategy* funding. However, Canadian jurisdictions, like those in the United States, vary in their expectations for partnerships. For example, while BC requires an agreement between educational institutions in order for students to gain dual credit, the *Alberta Dual Credit Strategy* encourages regional partnerships of institutions, business, and industry through a grant process. How to encourage industry involvement in local and regional partnerships and how to sustain partnerships over time is a key policy question. One of the school district interviewees commented, "we need a clear definition of dual credit for the province—a definition that allows some flexibility within each individual partnership but provides guidelines of acceptable practice."

The interview respondents with the most highly developed programs tended to be those with strong general facilitative partnerships and specific program partnerships. Institutions can be involved in both multi-lateral and bi-lateral partnerships for general and specific purposes. For example, the Regional Student Transitions Consortium in the Lower Mainland, which includes BCIT, Douglas College, SFU, and the New Westminster, Burnaby, and Coquitlam School Districts, has the broad aims of maintaining a dialogue and facilitating processes to increase the number of students graduating from high school and transitioning to local post-secondary education programs. The collaboration agreement of the Consortium has as its goals, to develop and implement a wide variety of avenues for enhancing student transition, and to develop appropriate systems for their coordination, including opportu-

> "Creating policies to promote more localized, yet government sanctioned, school-college/university partnerships, are increasingly seen as the direction for dual credit development" (Watt-Malcolm, 2012 p. 270).

nities for dual credit-concurrent students, laddering agreements, and pathways programs. On an individual institutional level, BCIT has developed dual credit partnerships in specific technical areas, such as in Computer Information System Administration in which students take technical courses at Burnaby South Secondary School, complete BCIT bridging courses after graduation, and then ladder into the second semester of the first year of a two-year diploma program.

Research

A recent study commissioned by the Higher Education Quality Council of Ontario (HEQCO) note of dual credit programs, "Though these programs have been offered internationally for over three decades, there is still little research and little conclusive evidence that demonstrate their effectiveness" (Community Partnerships Office and Academic & Student Affairs Special Research & Evaluation Project, George Brown College, 2014 p. 4). This observation echoes that of Golann and Hughes (2008), who comment that "additional research is needed to determine whether dual enrollment programs have any causal effect on college access or eventual academic success" (p.10).

A number of respondents indicated that they tracked numbers and completion rates of dual credit students. However, many noted that data collection issues, such as the lack of integration across collection protocols and practices, and datasets, make it difficult to conduct studies on student progression from their programs. At the secondary level, courses taken at post-secondary institutions are identified through the PSI code that is attached to dual credit courses. However, dual credit courses delivered by post-secondary institutions are not noted in the Student Transitions Project (STP)[22] combined dataset, making identification of dual credit students at PSI's problematic from the provincial perspective. In addition, the ITA apprenticeship system does not assign apprentices with the Personal Education Number used in the public education systems, making it difficult to track students from the secondary system into apprenticeship or back into public post-secondary education should they not proceed with an apprenticeship and pursue education in a PSI instead. One post-secondary interviewee commented that it would be helpful to have comparative stats about dual credit at various BC institutions, such as enrollment and continuation to post-secondary. Recently the MOE indicated that it is looking at the possibility of identifying subject matter as part of the codes that identify PSI courses on high school transcripts. Currently the PSI codes in the MOE dataset simply indicate the institution and sequence of enrolment. However, it is possible, using the Provincial Education Number (PEN), to determine how many high school students were granted credit at each post-secondary institution. In moving forward, providing annual reports using provincial statistics would be useful as the basis for further study and evidence-based policy making in the area.

Edward and Hughes (2011,) in their primer on implementation of dual credit for the Community College Research Center (CCRC), describe three kinds of research that can be used to judge the success of programs relative to their goals: descriptive research on program participation and implementation including the courses taken, where offered, and who teaches them; implementation research on program structure and implementation including barriers to participation, issues, and funding; and outcomes research on student success including course completion and graduation rates, GPA, credit accumulated, and PSI credential completion. These three areas provide plausible options for further research. Given the strong partnership between PSIs and schools and districts in some areas of the province, a pilot project might establish suitable parameters for more provincial data collection on dual credit activities. One of the more established regional partnerships may be interested in exploring this idea as a pilot project.

[22] See http://www.aved.gov.bc.ca/student_transitions/

Conclusion

This analysis suggests that the model of dual credit in BC has a number of strengths. The policy that governs dual credit is enabling in nature and allows schools, districts, and post-secondary institutions to work out arrangements that meet the needs of their students within a provincial framework. Opportunities for dual credit span the entire system including public and private colleges, institutes, universities, and schools and include high achieving, career oriented, and at-risk students. The percentage of schools, school districts, and PSIs that allow for the granting of dual credit is high in BC, as it is in the rest of Canada and the US although the percentage of students who take advantage of the opportunity is still relatively low. The emphasis on this type of transitional support is expected to grow as the Government of British Columbia and institutions continue to facilitate transitions from secondary to post-secondary education through initiatives in trades (WorkBC, 2014) and by reviewing high school graduation requirements (British Columbia Ministry of Education, 2014). Professionals from the BC school districts, post-secondary institutions, and agencies perceive that dual credit in the province is worthwhile for students and has considerable benefit for institutions, and is generally working well. Many respondents noted current fiscal challenges and stated that success of dual credit programming is dependent on continued adequate funding for programs and facilities.

A number of items offer support for the future of dual credit programs. Within the US literature, there is a wealth of specific advice related to implementation of dual credit programs, especially those focused on at-risk students, as well as three decades of experience with implementation of a variety of programmatic approaches. Alberta and Ontario, with their greater focus to date on career-oriented students, offer useful examples in that area, such as Alberta's use of a grant program to support diverse learner pathways for students, including credentialed pathways targeted to specific occupational areas and the existence of a provincial coordinating committee. In the area of data gathering and reporting, Ontario's detailed policy, program requirements, and reporting structure also provide good examples of the kind of information that could be gathered and reported on dual credit enrolment, retention, success, and credential completion.

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Appendix 1:

Electronic Survey Questions

BCCAT Study of Dual Credit

Introduction

Dear Institutional Contact:

I have contacted you to ask you for your participation in this brief survey about dual credit at your institution.

There is increased interest in enabling improved transitions between secondary school and post-secondary institutions. One policy that has been found to be useful in this regard is dual credit--the ability of high school students to earn both secondary and post-secondary credit by taking one course This survey is intended to gather information that will provide a picture of current policy and practice in BC. The results will be incorporated into a research paper produced by BCCAT for circulation to the BC K-12 and post-secondary systems. The survey addresses the elements of dual credit most commonly raised in the literature and from a number of interviews across the province. The survey has 15 questions and should take you between 10-20 minutes to complete. Reponses will be compiled into a table in the paper which will be circulated to institutional contacts for review before the paper is published.

Thank you for your assistance with compiling this information.

Regards
John
John FitzGibbon
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BC Council on Admissions and Transfer
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Vancouver BC V6B 3H6
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I agree to provide my name, institution name, and information regarding dual credit policy and practice to BCCAT.

Question 1

What type of dual credit does your institution support/offer?

- ☐ Accelerated Credit Enrolment in Industry Training (ACE-IT) and Secondary School Apprenticeship (SSA)
- ☐ Dual Credit (high school and post-secondary credit)
- ☐ Concurrent studies (post-secondary credit only)
- ☐ Advanced Placement (AP)
- ☐ International Baccalaureate (IB)
- ☐ None
- ☐ Other, please specify... _____

Question 2

From your institution's perspective, what is the purpose of offering dual credit to secondary students? Please click all that apply.

- ☐ Transition to post-secondary education--preparation for PSE expectations, rigour, social environment, etc.
- ☐ Recruitment tool.
- ☐ Enrolment tool.
- ☐ Opportunity for at-risk students to enter post-secondary education.
- ☐ Career path support (trades, apprenticeship, vocational/technical pathways).
- ☐ Opportunity for challenge by advanced students.
- ☐ Other, please specify... ____

Question 3

Why do you think that high school students take dual credit courses at your institution? Click all that apply.

- ☐ Post-secondary is more challenging/interesting than high school.
- ☐ Save money by shortening high school and post-secondary credential completion.
- ☐ Save time in completing secondary or post-secondary credential.
- ☐ May stop dropping out or failing high school.
- ☐ Wish to sample a post-secondary institution.
- ☐ Other, please specify... ____

Question 4

How many students enrolled at your institution in dual credit courses in the 2012-13 academic year?

Trades	
Academic	
AP	
IB	

Question 5

Does your institution have a Memorandum of Understanding (MOU) or similar agreement with schools or school districts?

- O Yes
- O No
- O Don't know

If yes, with:

- O School
- O School district
- O Both

Question 6

Is there a liaison position for dual credit?

- O Yes
- O No
- O Don't know

If yes, the position is located:

- ☐ at the school district office
- ☐ in one or more schools
- ☐ at the post-secondary institution
- ☐ Other, please specify... ☐

Question 7

Dual credit courses are offered at: (click all that apply)

	The high school	The post-secondary institution	Separate facility
Trades/vocational courses	☐	☐	☐
Academic courses	☐	☐	☐

Question 8

How are the students configured in dual credit courses? (click all that apply)

- ☐ High school student cohort.
- ☐ High school and post-secondary mix with high school students indicated to faculty.
- ☐ High school and post-secondary mixed with no identification.

Question 9

Dual credit courses are taught by: (click all that apply)

	High school teacher	Post-secondary instructor	Combination of high school teacher and post-secondary faculty
Trades/vocational/technical	☐	☐	☐
Academic	☐	☐	☐

Question 10

Is training or in-service professional development provided?

	Yes	No
For post-secondary faculty teaching high school students.	O	O
For high school teachers teaching post-secondary courses.	O	O

Question 11

What is the student required to pay when taking dual credit courses?

	Trades/technical	Academic
Student pays nothing.	☐	☐
Student pays for texts, ancillary fees, consumables only .	☐	☐
Student pays for tuition only.	☐	☐
Student pays for tuition, fees, texts, consumables.	☐	☐
Student pays application fee.	☐	☐

Question 12

What is the status of dual credit students at your institution? (click all that apply)

- ☐ They can vote in student elections.
- ☐ They get a UPASS and recreation access.
- ☐ They are considered 'special students,' i.e., non degree.
- ☐ They are treated the same as all other students.

☐ Other, please specify... [ ]

Question 13

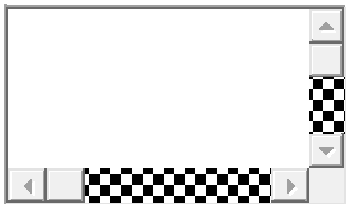
What is the most important issue in determining success of dual credit in your institution?

- O Scheduling: timetabling of school days, term shedule difference.
- O Communications: liaison persons, meetings, personalities, goals.
- O Bureaucracy: forms, different submission dates, different gov't policies.
- O Funding: variation in payment scales.
- O Faculty/staff: qualifications, collective agreements.
- O Student issues: maturity, diligence, aptitude.
- O Quality/standards: courses, outcomes, consistency, rigour.
- O Facilities/equipment.
- O Screening and advisement processes.
- O Admissions: loans, awards, basis of admission.

O Other, please specify... [ ]

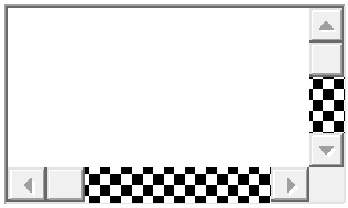
Question 14

Could dual credit be improved in your institution? Do you have any suggestions?



Question 15

Is there anything else you would like to add regarding dual credit? Is there something on the survey we missed or an element you would like to expand on? Thank you for your time and assistance!



Please provide your name, position and institution.

Name:

Position:

Institution:

If you would like a copy of the draft report for review before publishing, please provide your email address.

Appendix 2:

List of Agencies and Institutions Contacted and Surveyed

Institution	Interview	Survey Respondent	Other
Alberta Council on Admissions and Transfer, Alberta Education	√		
Acsenda School of Management		√	
Alexander College	√		
Advanced Placement (Canada)	√		
BC Ministry of Education	√		
British Columbia Institute of Technology	√	√	
Camosun College	√	√	
College of New Caledonia	√		
College of the Rockies	√		
Columbia College		√	
Coquitlam College		√	
Douglas College	√	√	
Go2 HR	√		
Industry Training Authority	√	√	
Kwantlen Polytechnic University	√	√	
Langara College	√		
Northern Lights College	√		
North Island College	√	√	
Northwest Community College	√		
Okanagan College	√	√	
School District #41 Burnaby	√		
School District #27 Cariboo-Chilcotin	√		
School District #79 Cowichan Valley	√		
Selkirk College	√		
Simon Fraser University		√	
Thompson Rivers University	√	√	
Trinity Western University	√		
University of British Columbia - Vancouver Campus	√	√	
University of the Fraser Valley	√	√	
University of Northern BC	√		
University of Victoria	√		
Vancouver Community College	√		
Vancouver Island University	√	√	
Career Education Society, Annual Fall Conference, Four Seasons Hotel, November 24, 2014			Two sessions on Dual Credit to 86 participants.

Appendix 3:

Student Completion of ACE-IT Program: 2013-2014 Academic Year

School District No. 45 (West Vancouver)	20
School District No. 05 (Southeast Kootenay)	26
School District No. 06 (Rocky Mountain)	4
School District No. 08 (Kootenay Lake)	31
School District No. 20 (Kootenay-Columbia)	36
School District No. 22 (Vernon)	36
School District No. 23 (Central Okanagan)	157
School District No. 27 (Cariboo-Chilcotin)	18
School District No. 28 (Quesnel)	7
School District No. 33 (Chilliwack)	34
School District No. 34 (Abbotsford)	103
School District No. 35 (Langley)	79
School District No. 36 (Surrey)	159
School District No. 37 (Delta)	52
School District No. 38 (Richmond)	48
School District No. 39 (Vancouver)	87
School District No. 40 (New Westminster)	49
School District No. 41 (Burnaby)	93
School District No. 42 (Maple Ridge-Pitt Meadows)	124
School District No. 43 (Coquitlam)	101
School District No. 44 (North Vancouver)	3
School District No. 46 (Sunshine Coast)	18
School District No. 47 (Powell River)	44
School District No. 48 (Sea to Sky)	16
School District No. 52 (Prince Rupert)	19
School District No. 53 (Okanagan Similkameen)	11
School District No. 54 (Bulkley Valley)	14
School District No. 57 (Prince George)	58
School District No. 58 Nicola-Similkameen	8
School District No. 59 (Peace River South)	35
School District No. 60 (Peace River North)	41
School District No. 61 (Greater Victoria)	81
School District No. 62 (Sooke)	20
School District No. 63 (Saanich)	103
School District No. 64 (Gulf Islands)	9
School District No. 67 (Okanagan-Skaha)	34

School District No. 68 (Nanaimo-Ladysmith)	64
School District No. 69 (Qualicum-Parksville)	34
School District No. 70 (Alberni)	10
School District No. 71 (Comox Valley)	39
School District No. 72 (Campbell River)	9
School District No. 73 (Kamloops)	79
School District No. 74 (Gold Trail)	1
School District No. 75 (Mission)	18
School District No. 79 (Cowichan)	32
School District No. 81 (Fort Nelson)	12
School District No. 82 (Coast Mountain)	20
School District No. 83 (North Okanagan-Shuswap)	59
School District No. 85 (Vancouver Island North)	2
School District No. 91 (Nechako Lakes)	15
Grand Total	**2,172**

Source: ACE-IT Completion Reports Sept. 2013 and Feb. 2014, Ministry of Education, Graduation, Skills & Distance Learning Branch, December 2014.

Appendix 4:

Summary of 2013/14 ACE IT Completion Reports

TECHNICAL PROGRAM	# OF STUDENTS COMPLETED
Aircraft Maintenance Technician	6
Aircraft Structural Technician	19
Automotive Service Technician (All)	219
Automotive Service Technician 1	18
Baker	20
Cabinetmaker (Joiner)	17
Carpenter	375
Construction Electrician (Electrician)	247
Dairy Production Technician	11
Diesel Engine Mechanic	14
Hairstylist (Cosmetologist)	241
Heavy Duty Equipment Technician (Heavy Duty Equipment Mechanic)	81
Heavy Equipment Operator	28
Inboard/Outboard Mechanic	3
Industrial Mechanic (Millwright)	32
Instrumentation and Control Technician (Industrial Instrument Mechanic)	10
Landscape Horticulturist	6
Machinist	17
Marine Service Technician	4
Metal Fabricator (Fitter)	45
Motor Vehicle Body Repairer – Automotive Collision Repair Technician	25
Motorcycle Mechanic	4
Painter And Decorator	12
Parts and Warehousing Person 1	1
Plumber	145
Professional Cook 1	304
Recreation Vehicle Service Technician	4
Refrigeration and Air Conditioning Mechanic (Refrigeration Mechanic)	7
Roofer (Roofer, Damp and Waterproofer)	2
Sheet Metal Worker	4
Steamfitter-Pipefitter	1
Truck and Transport Mechanic (Commercial Transport Vehicle Mechanic)	9
Utility Arborist	17
Welder	92
Welder Level 'C'	131
Total	**2,172**

Source: *ACE-IT Completion Reports Sept. 2013 and Feb. 2014*, Ministry of Education, Graduation, Skills & Distance Learning Branch, December 2014.

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