

Dual Credit Programs

Exploring Dual Credit Student Transition and Post-Secondary Academic Success

*Prepared for BCCAT by Cindy Drover-Davidson, Kelly Betts,
Michael Bennett and Dan Hodgson*

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BCCAT

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DUAL CREDIT PROGRAMS:

Exploring Dual Credit Student Transition and Post-Secondary Academic Success

Executive Summary

This study examined the transition and post-secondary achievement of the dual credit (DC) students in the South Island Partnership (SIP). The SIP is a partnership of Camosun College and five school districts located in the South of Vancouver Island, BC. The SIP DC options include Trades programs, Trades exploration courses, and courses in Arts and Sciences. This study explored SIP DC student enrolment, achievement, and transition over ten academic years from 2005 to 2015. The analysis of student transitions within and beyond the SIP was possible through the use of four datasets: SIP data, Camosun College data, Student Transitions Project (STP) mobility data, and Industry Training Authority (ITA) numbers of student enrolment and achievement.

During the ten year period, 3,583 secondary students participated in the SIP DC options. The SIP grew significantly over ten years: from 80 students in three programs in 2003, to about 1,000 students in over forty different program and course areas in the 2014-2015 academic year. The majority of students – 88% of non-Trades students, and 68% of Trades students – had passing grades in their DC programs/ courses, indicating high levels of student success. Around 50% of DC students earned credentials during the study period, the majority of which were certificates (73% of all credentials).

This study examined the transition and post-secondary achievement of the dual credit (DC) students in the South Island Partnership (SIP); a partnership of Camosun College and five school districts located in the south of Vancouver Island, BC.

Around 60% of DC students transitioned to further post-secondary studies at Camosun and other institutions after completing their DC courses and programs. Of those post-DC students who transitioned to post-secondary, 62% took further post-secondary study at Camosun College. This suggests high retention rates post-DC at the originating institution. Another finding that could be helpful for enrolment management planning was that DC students typically transitioned to the same post-secondary areas of study that they were involved in for their DC program. For example, 86% of Automotive students who returned to Camosun participated in further Trades education.

The report concludes with a number of considerations for doing similar studies at other institutions in the province. Opportunities for such studies include the data available through provincial databases to track student transitions beyond a single post-secondary institution. Challenges include the amount of time and resources to obtain the necessary data, as well as the difficulty to match STP and ITA data. Further research on the success of DC students could focus on student performance by program/ discipline or delivery model, as well as DC students' experiences and perceptions of their DC program and future pathways.

Introduction

In accord with the policies established by the British Columbia Ministry of Education (Appendix 1), BC School Districts participate in partnerships and collaborations with recognized post-secondary institutions in the development of Dual Credit (DC) educational opportunities for secondary students. This paper offers a quantitative analysis of DC students' transition to post-secondary in terms of: 1) student registration and enrolment, 2) completion, 3) achievement, 4) retention, and 5) transition rates from high school to post-secondary education. These points are illustrated by a case study of the DC opportunities offered by the South Island Partnership (SIP) at Camosun College in Victoria, BC. This study traces student progression from the first SIP Dual Credit course or program through continuing educational experiences both at Camosun College and other post-secondary institutions in British Columbia.

Definitions

Before discussing the parameters of this study, some definitions are key to understanding the context in which Dual Credit operates. These are explained below.

What is Dual Credit?

Although many institutions throughout North America have varying definitions for Dual Credit,¹ throughout this paper, we define DC opportunities as post-secondary

“Dual Credit” (DC) refers to post-secondary programs or courses offered to secondary students while they are still in high school. DC students are both secondary and post-secondary students simultaneously, and they earn credits toward high school graduation as well as post-secondary credits.

programs or courses offered to secondary students while they are still in high school. Dual Credit students are both secondary and post-secondary students simultaneously, and they earn credits toward high school graduation as well as post-secondary credits, many of which are transferrable between BC post-secondary institutions. A small number of SIP courses or programs are specific to Camosun College and do not transfer to other post-secondary institutions. Students who complete these courses or programs earn credit at Camosun.

How is Dual Credit Funded?

Camosun College tuition costs for a DC student are paid by the student's school district, whose funding is provided by the BC Ministry of Education. Dual Credit students are exempt from Camosun Student Society ancillary fees but are responsible for paying the application fee as well as the costs for textbooks, supplies, or personal safety equipment.

¹ Some institutions have similar-sounding but slightly different definitions of and implications for Dual Credit, and/or use different wording to describe their processes, such as *Dual Enrolment*, *Concurrent Admission*, *Accelerated Entry*, *School-Within-College*, and other terminology (FitzGibbon, 2015, p. 4).

Teacher or Instructor?

Throughout this paper, the word teacher is used in reference to the high school teacher who delivers the high school course content, and the term *instructor* refers to the Camosun College instructor who delivers the College course content. In the DC arrangement, teachers and instructors coordinate instruction and work collaboratively to support student learning.

Program or Course?

Courses are individual units of instruction on one particular topic at one particular level, e.g., Math 100, Psychology 130, or Accounting 110. Both secondary and post-secondary dual credit courses are offered in a variety of delivery models, which are defined in the corresponding section below.

Programs are a set of courses on a particular topic which lead to a specific credential. Programs vary in the number of required courses; for example, students in the Electrical Foundation program participate in three post-secondary courses, while students in the Health Care Assistant program take twelve post-secondary courses. Delivery models also vary for programs.

At Camosun College, DC students can take courses or a program in a defined DC “Transition Program”, as long as they possess the appropriate prerequisites.

Transition Programs and Disciplines

At Camosun College, DC students can take courses or programs in a defined DC “Transition Program”, as long as they possess the appropriate prerequisites. DC Transition Programs are defined by the partners and include secondary and post-secondary courses or programs in a specific field of study. Currently the SIP offers five transition program pathways: communication, business, health, trades and technology. The partnership DC tran-

sition program title/ categories have evolved over time. Initially, transition programs reflected post-secondary program areas, e.g., Trades & Technology, or Arts & Science. The SIP DC transition programs are now focused on career pathways and include courses that lead to employment in a specific field (Accountant, Health Care Assistant, Electrician, etc.). Institutional and provincial datasets included in this report are categorized based on the post-secondary school of origin or discipline, and may not be appropriately categorized by DC career pathway due to the data collection and sorting processes. The term “discipline” in the tables refers to a grouping of programs or courses based on the dataset and its organizational structure. Each dataset has specific discipline groupings which can make comparisons difficult.

Enrolment or Registration?

For the purposes of this paper, ‘Enrolment’ refers to the number of unique students participating in post-secondary programs or courses. ‘Registration’ refers to the number of individual post-secondary courses or programs that enrolled students may be participating in. Enrolled students may be registered in more than one program or course during their DC tenure, thus the number of registrations is higher than the number of enrollees. For example, some enrollees may take both the Trades Exploration (TASK) program and the Technology Exploration (TEAC) course; others may take Biology and Chemistry. It is possible for students to do more than one DC program or course while still in high school as long as they meet the prerequisites of each option and the courses are part of their education/ transition plan. For example, both TASK and TEAC have no prerequisites except that students must be fifteen or older and in Grade 10, 11, or 12; therefore, the possibility exists for a student to take TASK in Grade 10, TEAC in Grade 11, and perhaps even a third program or course in Grade 12. The prerequisites for College-level Biology and Chemistry include completion of, or simultaneous

registration in, English 12 and AP Biology and Chemistry at the high school. This usually necessitates that the student be in Grade 12, although rarely some may meet the requirements for one or both in Grade 11.

Research Questions and Methodology

The research questions focused on DC student accomplishment, progression, and transition. The comparison with non-DC-students was beyond the scope of the study. The following questions will be discussed in this report:

- Which years and what duration (time period) should the case study encompass?
- How many students participated in DC programs and courses in the time period?
- How many recurring DC enrolments occurred within the time period?
- What grade was achieved in each DC program or course?
- How many DC students transitioned into post-secondary after high school graduation?
- If students transitioned to post-secondary, when did students transition – immediately following high school or later?
- Which post-secondary institution(s) did DC students attend in addition to Camosun College?
- Which programs or courses did continuing/ returning students transition to?
- What grades or credentials were achieved post-DC?

The data for this study covers the period between September 1, 2005 and August 31, 2015; a span of ten academic years. Four distinct datasets were analyzed to obtain the clearest picture.

Prior to beginning this study, several pieces of information – both internal and external to Camosun College – were required on policies, permissions, and identification of data sources and data types. The data for this study covers the period between September 1, 2005 and August 31, 2015; a span of ten academic years. Four distinct datasets were analyzed to obtain the clearest picture:

- The SIP databases. Over the years, SIP office staff have used a variety of record-keeping systems to monitor and report out on student activity. For this project, a large quantity of data was gathered and sorted, including the semesters of participation, the school districts that students came from, the programs and/or courses taken, and the grades.
- Camosun College’s student records database, Colleague. Within Colleague, it is possible to code DC students as such, separately from the coding of other student groups. This coding makes it possible to study DC student progress and continuation. Without a tracking mechanism from the outset, this type of case study would become very difficult. The database was used to find these students and retrieve not only each students’ DC participation, but all of their post-DC activity at Camosun College. The Colleague data, in Excel spreadsheet format, was provided to the SIP research team for analysis. The SIP and Camosun College databases were ultimately studied as virtually one set of “Camosun data”.

- Industry Training Authority (ITA) database. In this database, Trades Worker Identifications (TWIDs) are not linked to Personal Education Numbers (PENs)², used in Ministry of Advanced Education or Ministry of Education (e.g., Student Transitions Project) databases. Therefore, a request was made to the ITA to provide data on all Accelerated Credit Enrolment in Industry Training (ACE-IT) students (high school students participating in trades programs offered through partnerships with authorized BC training providers) from five school districts in the SIP.
- Student Transitions Project (STP) student mobility data. A list of DC student PENs was submitted to the STP along with a detailed list of the specific information requested (data request details in Appendix 2). STP data indicated which institutions Camosun’s DC students later attended, and the faculties in which they subsequently earned credentials. Credential categories were summarized to protect privacy.

Gaining access to the external ITA and STP data took considerably more time than anticipated. After it was established that the project was exempt from ethics approval by Camosun College, requests were put forward to the ITA and the STP to access relevant data. Several versions of the data requests were submitted to fit the research questions, and it took several months to receive the data.

Case Study - The South Island Partnership

The South Island Partnership (SIP) provides a hub for collaboration and cultivates relationships to support student transition to apprenticeships and post-secondary education through DC opportunities. The SIP includes five school districts (61 Victoria, 62 Sooke, 63 Saanich, 64 Gulf Islands, and 79 Cowichan Valley), which include nineteen secondary schools and five adult learning centers, and the six Camosun College Schools (Access; Arts & Science; Business; Center for Sport and Exercise Education; Health and Human Services; and Trades and Technology). The SIP vision is to work together to maximize resources to support the smooth transition of secondary students to further studies and to work. SIP’s DC student numbers have grown significantly over time, from 80 students who took Carpentry (40), Welding (18), and Manufacturing Technician Foundation (22) programs available in 2003, to about 1,000 students in over forty different program and course areas during the 2014/15 academic year.

The development of the South Island Partnership Dual Credit was shaped by government policies and programs, as well as by strategic decisions by SIP partners. Key stages are outlined below:

² Personal Education Number is a unique numerical identifier that follows a student through all their educational endeavours in British Columbia. At each institution or organization, students are also assigned an ID number. All trades students receive an ITA registration number called a TWID (Trades Worker ID). A number of identifiers must be connected to determine the exact educational path any given student has taken throughout the province.

The South Island Partnership (SIP) provides a hub for collaboration and cultivates relationships to support student transition to apprenticeships and post-secondary education through DC opportunities.

Early Days (prior to 2003): The partnership started prior to 2003 as Camosun Quad District partnership (with four school districts participating) and piloted a variety of course options with the goal of supporting student transition to post-secondary. This included courses such as Math 100, Biology 150, Health 110, Business and a Trades Orientation Program (TOPS) offered through a variety of delivery models. During this period the Ministry of Education and Advanced Education were promoting “Career Technical Centers” as regional collaborations to support youth transition to post-secondary education through regional grants. The new graduation program implemented in 2004 was under development, and post-secondary credit recognition and funding were added.

Pilot Programs (2003 – 2005): The Partnership hired a Transitions Coordinator to lead the development and provide support for DC development, and participated in a Ministry of Advanced Education (AVED) pilot program, which led to initiatives in trades and technology programs. The Ministry of Education started recognizing and providing course-based funding for DC in 2004, making the initiatives attractive to schools and students.

South Island Partnership (2005 – 2009): Funding provided by the ITA for the Accelerated Credit Enrolment in Industry Training (ACE-IT) program allowed for further growth of Trades programs (Tables 1-3). In 2006 the Co-

wichan Valley School District became a partner, and the initiative grew to become the SIP. Ministry of Education DC recognition and funding policies provided sufficient funding and flexibility to support the development of DC options. During the 2009 SIP Strategic Planning process the partnership established goals to expand DC options to include more career pathways. A target participation rate of 20% of Grade 12 students was identified, with projected growth of approximately 2% per year.

Expansion (2010 – 2015): The partnership achieved its strategic targets in 2014-2015. Programs were added, based on forecasted skills shortages and a projected increase in demand for health services in the region. At the same time more DC options were developed for courses in Business to address entry-level worker shortages in business and government. Arts and Science options were developed to ease student transition to a wider range of career pathways. TEAC and TASK programs were introduced in 2011 – 2012 to increase the exposure of secondary students to trades and technology training. The variety of offerings led to a significant growth of student numbers (Figure 1).

The SIP case study explored five topics:

- Student Enrolment and Registration
- Completion
- Achievement
- Retention
- Transition

The first four topics were based on the data collected at Camosun College both during and after students’ DC experiences. The fifth topic, Transition, examined how the SIP’s DC students transitioned from Camosun to other institutions throughout British Columbia to complete or augment their career pathways.

Student Enrolment and Registration

During the time period of this study, 3,583 unique students (enrollees) registered in 4,267 DC programs and courses (Table 1 and Figure 1). Table 1, 2, and 3 present the number of registrations combined by discipline (Table 1); by program (Table 2); and by course (Table 3). Tables 1-3 show the total number of registrations, not unique numbers of enrollees. Some individual enrollees registered in more than one course and/or program while in secondary school and were included more than once in the Tables.

The analysis of trends in registration by discipline over time is complex and includes a variety of factors including: secondary school staff (expertise and interest), student interest, employment/economic trends, expansion or contraction of DC options, and changes within the partnership. There was growth of DC within each discipline and the addition of disciplines over time. Table 1 indicates growth in registrations by discipline from 130 in 2005-2006 to 980 in 2014-2015, an increase of 753% over the 10-year period. Also notable was the addition of disciplines over the study period. Early disciplines/ transition programs included Trades and Science options. Health Care, Arts and Business, Trades and Technology Exploration were introduced at a later time, and most recently technology options were added. Each discipline contained a number of course or program options.

Trades programs have been a major focus for the SIP since inception, and they experienced steady growth until 2013-2014. The addition of the TASK program in 2011-2012 expanded the Trades pathways, which effected a reduction of student transitions to specific

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Trades programs in the short term. During the same period, Vancouver Island University opened a trades training center in the Cowichan School District resulting in a reduction in students transitioning to Camosun College Trades programs in favour of local training options. The technology offerings experienced a spike in 2013-2014 due to a cohort class in electronics offered as a pilot that year. New course offerings often incur a variant growth period that evens out over a period of time. All other areas experienced a consistent increase in student enrolment.

Business, Arts and Sciences exhibited the highest steady growth during 2012-2015 (Tables 1-3) due in part to secondary school expansion of DC options in response to the decrease in career related programs offered in secondary schools. Most secondary schools in the South Island no longer offer business or health related education courses or programs. An increased interest in offering transition programs was also a factor.

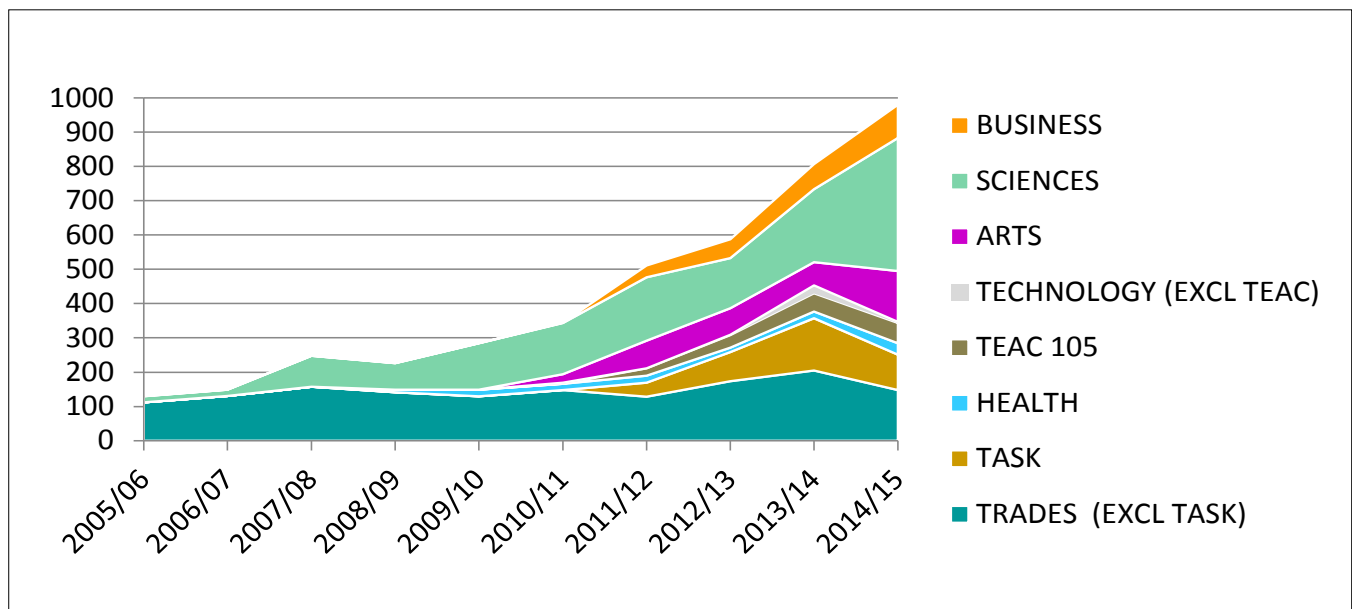
Technology and Health programs were added over time as DC options for students in specific fields of study, and seats were allocated for onsite programs (e.g., Health Care Assistant, Community Support and Education Assistant, Computer Network Technician). Exploration courses such as TEAC 105 were developed and offered as part of a post-secondary certificate program.

TABLE 1: Total DC Registrations by Discipline (Program and Course Registration Combined)

Discipline	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Trades (Excl. TASK)	112	131	158	141	130	148	128	174	205	148	1,475
TASK	0	0	0	0	0	0	41	85	152	103	381
Health	0	0	0	8	19	18	21	13	20	33	132
Technology (Excl. TEAC 105)	0	0	0	0	0	3	0	1	23	4	31
TEAC 105	0	0	0	0	0	0	21	36	53	59	169
Arts	0	0	0	0	0	25	81	77	68	148	399
Sciences	18	18	90	77	135	149	185	147	213	388	1,420
Business	0	0	0	0	0	2	34	54	73	97	260
Total	130	149	248	226	284	345	511	587	807	980	4,267

Source: Camosun College Database

FIG. 1: Growth by Discipline over Time (Number of Registrations)



The various course delivery models might have also played a role in the growth of each DC discipline or program area. Some models were employed for a short time; some were long-time continuing models; and some were new and undergoing evaluation. Delivery models were student centered, developed collaboratively between secondary schools and the college staff maximizing existing resources (facilities and staff expertise). Models were adapted to meet the needs of students based on the success (measured as student achievement) of the program.

Carpentry, one of the original DC options, has been delivered as a DC program since 2003 in a variety of delivery models:

- 1) College delivery model – a full class of 18 secondary students participated in a six-month foundation program at Camosun College,
- 2) Blended delivery model – the secondary school offered a one or two semester carpentry program and students that successfully completed that program then transitioned to Camosun College to complete the Level 1 Apprenticeship program,
- 3) Secondary school delivery model – the secondary school offered the full carpentry program and students were assessed by Camosun College,
- 4) College seats delivery model – secondary students joined regular scheduled Camosun College carpentry foundation program along with adult learners on campus.

One week was also added to the DC Level 1 Apprenticeship program to allow for additional exposure and skill development of the students participating in the blended delivery model. Tutors were available to stu-

The “Blended Delivery - Cohort in Secondary School” model allowed DC students to “feel at home” and exposed students to the rigor of post-secondary education in a supported setting.

dents while taking a program at the college during the summer months. In terms of the data analysis, Carpentry registration was much stronger from 2005-2008 as several secondary schools offered blended delivery and secondary school delivery model programs. When the construction industry experienced a downturn in 2009, student interest waned, and schools experienced challenges with recruiting carpentry teachers. As a result, the registrations dropped, which eliminated some of the secondary school programs.

Some delivery models were more applicable to certain programs than others. For example, the “Blended Delivery – School to College” model was useful for trades programs, such as Automotive, Carpentry, Cook, and Electrical, where schools had the necessary shops, experienced staff, and equipment to support the Level 1 Apprenticeship program delivery. The “Blended Delivery – Cohort in Secondary School” model allowed DC students to “feel at home” and exposed students to the rigor of post-secondary education in a supported setting. The “Cohort in College” model was used for TEAC and the Lab Sciences courses (e.g., Biology, Chemistry, and Physics) that required the use of the post-secondary lab facilities. Appendix 3 contains a breakdown of which models were and/ or currently are in use. To distinguish between Camosun College and secondary courses and programs, post-secondary offerings are shown in all capitals (Appendix 3). To understand the efficacy of specific models further research is required.

TABLE 2: Dual Credit Program Registrations*(NB: All trades registrations are either Foundation or Apprenticeship Level 1)*

Program Area	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Trades											
Automotive	7	24	19	23	25	23	21	45	39	33	259
Carpentry	48	51	52	35	35	38	17	18	33	18	345
Electrical	3	10	15	26	16	17	26	33	38	30	214
Plumbing	1	2	8	4	5	8	10	12	7	4	61
Professional Cook	25	22	32	18	19	28	8	20	26	20	218
Sheet Metal	1	0	1	6	1	0	5	4	7	10	35
Welding	27	22	21	15	16	18	30	28	33	25	235
Other: Trades programs: Heavy Mechanical, Joinery, Refrigeration & Air Conditioning, Horticulture	0	0	10	14	13	16	11	14	22	8	108
Trades Total	112	131	158	141	130	148	128	174	205	148	1,475
Health											
Community Support & Education Assistant, Health Care Assistant	0	0	0	8	7	5	11	10	11	21	73
Technology											
Computer Network Electronic Technician, Computer Systems Technology, Electronics & Computer Electronics Technology	0	0	0	0	0	0	0	0	1	2	3
Other Programs											
TASK (Trades Awareness, Skills & Knowledge)	0	0	0	0	0	0	41	85	152	103	381
Total Program Registrations	112	131	158	149	137	153	180	269	369	274	1,932

Source: Camosun College Database

TABLE 3: Dual Credit Course Registrations

Course Area	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Arts											
Art & Digital Media	0	0	0	0	0	1	2	0	1	1	5
English & Creative Writing	0	0	0	0	0	13	36	23	25	31	128
Criminal Justice	0	0	0	0	0	11	36	52	18	50	167
History & Geography	0	0	0	0	0	0	0	0	18	54	72
Other: Anthropology, Japanese, Music, Philosophy, Political Science, Religion, Spanish, Sociology	0	0	0	0	0	0	7	2	6	12	27
Total Arts	0	0	0	0	0	25	81	77	68	148	399
Sciences											
Biology	18	18	55	37	75	62	54	46	46	68	479
Chemistry	0	0	1	9	7	11	12	21	21	20	102
Physics	0	0	2	6	23	36	32	24	23	19	165
Math	0	0	32	25	30	26	31	2	32	97	275
Psychology	0	0	0	0	0	14	56	54	91	184	399
Total Sciences	18	18	90	77	135	149	185	147	213	388	1,420
Total Arts & Sciences	18	18	90	77	135	174	266	224	281	536	1,819
Business											
Accounting, Business Communications, Marketing	0	0	0	0	0	2	34	54	73	97	260
Health											
Early Learning & Care, Health, Practical Nursing	0	0	0	0	12	13	10	3	9	12	59
Technology											
Computer Science	0	0	0	0	0	3	0	1	1	0	5
Electronics	0	0	0	0	0	0	0	0	21	2	23
Technology Explorations	0	0	0	0	0	0	21	36	53	59	169
Total Technology	0	0	0	0	0	3	21	37	75	61	197
Total Course Registrations	18	18	90	77	147	192	331	318	438	706	2,335

Source: Camosun College Database

Completion and Achievement of Dual Credit Students

More than 75% of grades achieved by DC students from the 10-year SIP study were of B- quality or higher (70% and up), while 16.5% of grades were in the A+ range (90% or higher) (Table 4). The grades were analyzed on a by-course and by-program basis, and then the grades were rolled up and presented by discipline. Because TEAC and TASK were new programs, they were separated from their related disciplines for tracking purposes.

Overall, 5% of DC students withdrew from the DC programs, and 6.5% received a grade below 50% (Table 4). The highest withdrawal rates were found in Business (7.7%), Trades (7.3%), and Arts (6.5%). The highest percent of students with grade >50% was present in

TEAC (95.7%), Health (94.5%) and Technology (91.7%). The offerings with the highest percentage of top grades (90-100%) were Technology (29.2%), Science (27.3%), and TEAC (22.8%). For all DC course or programs, students who achieve grade >50% receive a passing grade on their high school transcript based on Ministry of Education grading standards. For trades programs, however, the successful completion of the post-secondary program requires achieving grade >70%, and 68% of trades students were able to achieve post-secondary standards.

A significant percent of students entering DC had challenges with learning. Numerous DC trades students were admitted with an Individual Education Plan (IEP), indicating such challenges. For example, between September 1, 2012 and August 31, 2015, 9% of students (n=210) had documented IEPs. Each student was carefully evaluated before being admitted to the program or course of choice to determine the student's likelihood

TABLE 4: Completion and Achievement Rates by Discipline

Discipline	Number of Registrations	% of Total Registrations	Completion Rate (Grade of 50% or Higher)	Achieved Grade of 70% or Higher	Achieved Grade of 90% or Higher	Unsuccessful (Grade of Less Than 50%)	Withdrew
Arts	399	9.4%	86.8%	66.1%	9.7%	6.7%	6.5%
Business	260	6.1%	85.7%	62.2%	15.8%	6.6%	7.7%
Health	132	3.1%	94.5%	90.4%	16.9%	2.9%	2.6%
Science	1,420	33.3%	88.1%	69.0%	27.3%	7.4%	4.5%
Technology	31	0.7%	91.7%	83.3%	29.2%	4.2%	4.2%
TEAC	169	4.0%	95.7%	83.7%	22.8%	3.3%	1.1%
Trades	1,475	34.6%	83.2%	67.7%	1.8%	9.5%	7.3%
TASK	381	8.8%	83.2%	83.2%	8.4%	11%	5.8%
Total	4,267	100%	88.6%	75.7%	16.5%	6.5%	5.0%

Source: Camosun College Database

of success in their field of study. If there were gaps in prerequisites – for example, failing high school grades in Math or English – a student would not be admitted. Once accepted, students were expected to meet the requirements for completing their chosen program or course. The SIP provides as much assistance as possible, by counseling and coaching students, working with parents and introducing the student to Camosun’s Disability Resource Centre (DRC), which provides supports for learning challenges; arranging for math or study skills tutoring; providing funds for equipment and supplies, and in some cases housing supports.

Retention

Retention refers to those students who completed a DC program or course and returned to Camosun College to register in further post-secondary education. Of the 3,583 students who participated in DC between September 1, 2005 and August 31, 2015, around a third (39%; n=1,414) returned to Camosun College for further post-secondary education and training (Table 5) before or at the time of this study. Of those, on average 21% immediately (within the first year) transitioned to Camosun after their SIP activity, while on average 43% returned within 3 years (Table 5). Longitudinal analysis

TABLE 5: Retention Rate of DC Students as of November 2016

Academic Year	Retention Numbers	Retention Rate	Retention Rate up to First Year	Retention Rate up to First 3 Years
2005-06	102	62%	25%	48%
2006-07	88	72%	28%	56%
2007-08	139	57%	22%	44%
2008-09	126	52%	21%	41%
2009-10	137	53%	30%	48%
2010-11	137	45%	22%	40%
2011-12	176	42%	20%	40%
2012-13	175	42%	19%	41%
2013-14	179	27%	16%	
2014-15	155	21%	21%	
Total Unique	1,414			
Average Rate				
2005-06 to 2014-15		39%	21%	
Average Rate				
2005-06 to 2012-13		50%		43%
Average Rate				
2005-06 to 2011-12		52%		

Source: Camosun College Database

may provide a deeper understanding of retention over time: the return rates indicated that students continue to return many years after their DC experience. After ten years, the DC cohorts of 2005-2006 and 2006-07 showed a retention rate of 62% and 72% respectively (Table 6). Table 5 provides more detail on the 10-year return rate.

When analyzing and representing student retention, an explanation of what appropriate transition means for various transition program areas is required. For example, the percent of returning students in the representative areas ranged from 84% (Biology) to 27% (Automotive) (Table 7). Biology is offered as a health care transition program option, and students who plan to enrol in health care programs benefit from the early start and preparation for entry to health care post-secondary programming. Their next step would be to

continue with post-secondary education to complete a certificate, diploma, or degree in a healthcare program. Automotive service technician retention rates may appear low. However, DC Automotive students complete an entire certificate program including industry credential. They are required upon completion to seek employment and complete workplace-based hours prior to returning for further post-secondary education. Besides, students may not require higher levels of education for some time in the automotive trade. Given these considerations, the rate of return may be reasonable.

This is also the case for Professional Cook and Welding: employment options are available in these trades without further education beyond initial certification. This differs however for other trades, such as Carpentry and Electrical, as trades certification requires completion of four levels of training and approximately four years

TABLE 6: Retention Rate Detail for Each Academic Year 2005 – 2016 Including DC year as of May 2016

(Academic Year is the year DC students returned to Camosun College for further education as of November 2016)

DC Year	Academic Year												Total
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
2005-06	2.4%	23.0%	17.0%	6.1%	3.0%	3.6%	2.4%	1.8%	1.8%	0.0%	0.6%	0.0%	61.8%
2006-07		1.6%	26.0%	19.5%	8.9%	2.4%	3.3%	3.3%	3.3%	2.4%	0.8%	0.0%	71.5%
2007-08			1.2%	20.4%	14.7%	7.8%	4.5%	2.4%	2.9%	2.0%	0.8%	0.0%	56.7%
2008-09				0.8%	20.3%	12.9%	7.1%	3.7%	2.5%	2.5%	2.5%	0.0%	52.3%
2009-10					1.2%	29.0%	10.8%	6.9%	2.3%	1.5%	1.2%	0.0%	52.9%
2010-11						3.9%	17.8%	9.5%	8.6%	3.3%	1.3%	0.7%	45.1%
2011-12							0.5%	19.4%	13.2%	6.7%	2.4%	0.0%	42.2%
2012-13								0.5%	18.3%	13.3%	9.0%	0.5%	41.7%
2013-14									1.7%	14.6%	9.8%	0.9%	26.9%
2014-15										1.5%	19.4%	0.0%	20.9%

Source: Camosun College Database

of workplace-based training. In this case students are required to return for further post-secondary education to complete the program ideally over a four-year period, or they may complete a challenge process offered by the ITA.

In the table below, only selected program areas have been included, based on their popularity among the DC student population. The analysis included students who returned to complete for-credit or certificate programs, and did not include students who returned to participate in a continuing education program or registered in upgrading courses or programs.

DC students typically transitioned to the same post-secondary areas of study that they were involved in for their DC program, e.g., 86% of Automotive students who returned participated in further trades education, and 65% of returning Accounting students chose Business programs at Camosun (Figure 2).

The majority of returnees (65%; n=55) in Accounting programs returned to further their studies in Business. More than one-quarter of returnees came back to do other academic programming: 8% returned to take Health, Trades, or Technology programs. Of the 65% of former DC students who took further education in Busi-

TABLE 7: Dual Credit Students Returning to Camosun: by Discipline as of November 2016

Discipline	# of Students	# Returned	% Returned
Business			
Accounting	163	85	52%
Communication			
English	128	75	58%
Criminology	167	60	36%
Health			
Biology	479	401	84%
Health Programs	73	36	49%
Trades			
Automotive	259	69	27%
Carpentry	345	140	40%
Electrical	214	109	51%
Welding	235	92	39%
Professional Cook	218	82	38%
Technology			
TEAC	169	49	29%

Source: Camosun College Database

ness at Camosun College, the overwhelming majority (96%) enrolled in the Bachelor of Business Administration program, while 4% enrolled in programs in Hospitality Management or Applied Business Technology.

While 59% (n=237) of DC Biology students who returned went into Arts and Science subject areas, 29% (n=116) went into Health and Sport programming. Sixty percent of the former Biology students who returned to Health

or Sport areas (Figure 3) participated in the Bachelor of Science in Nursing program, which students start at Camosun College and complete the last three semesters at the University of Victoria through a formal agreement between the two institutions. The Bachelor of Athletic and Exercise Therapy (13% of students returning to Health or Sport programs) and Practical Nursing (5%), among others – can be completed at Camosun College.

FIG. 2: Programs of Returned Students from DC Representative Areas

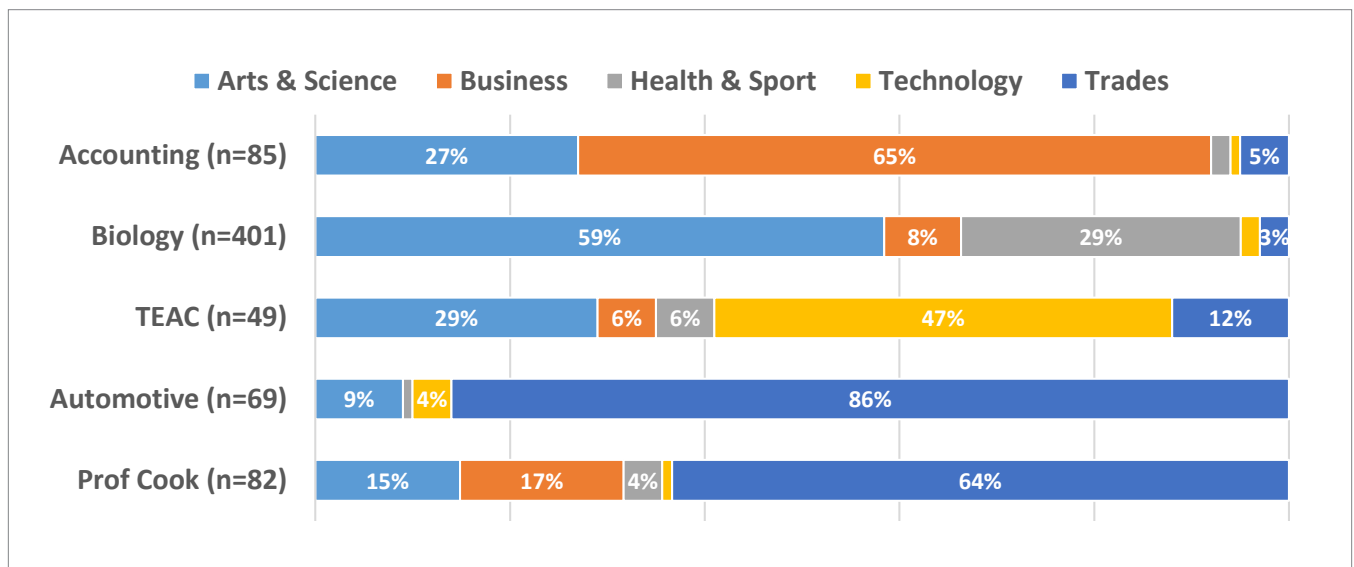
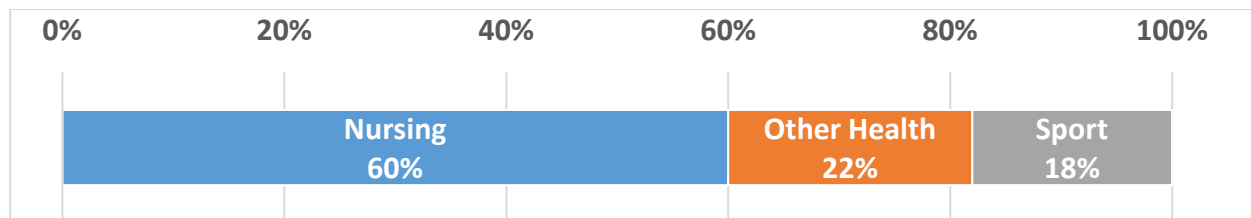


FIG. 3: Programs of DC Biology Students Who Returned to Health and Sport



The Technology Explorations course, known as TEAC 105, is open to secondary students in Grades 10, 11, and 12 without prerequisites. Introduced in 2011, TEAC explores four engineering technology areas: Civil Engineering, Electronics Engineering, Computer Science, and Mechanical Engineering. During the period September 2011-August 2015, 169 students took this course. About half of returning students (47%, n=23) took

Technology programs upon return (Figure 2). Although TEAC instruction is weighted equally between the four engineering technologies, Mechanical Engineering has attracted the most returning TEAC students (65% of returnees from TEAC) (Figure 4). The numbers of registrations in TEAC averaged 90 students per academic year in the two academic years 2015-2016 and 2016-2017.

FIG. 4: Percent of TEAC Students Who Returned to Engineering Technology Programs

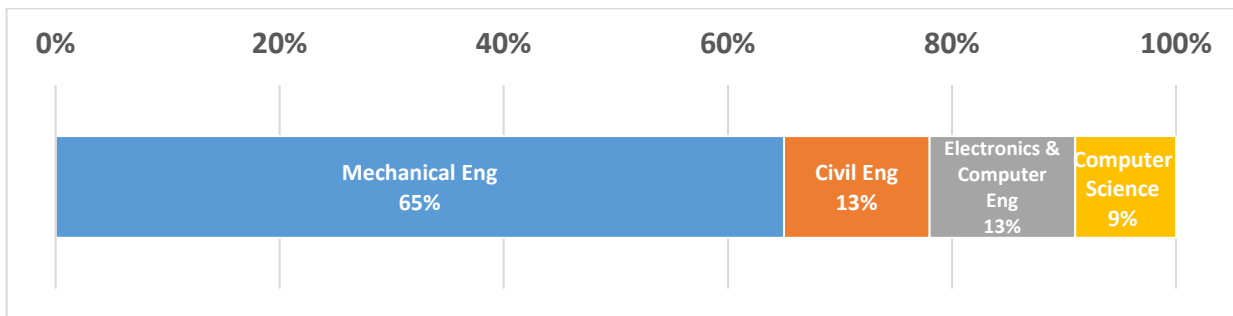
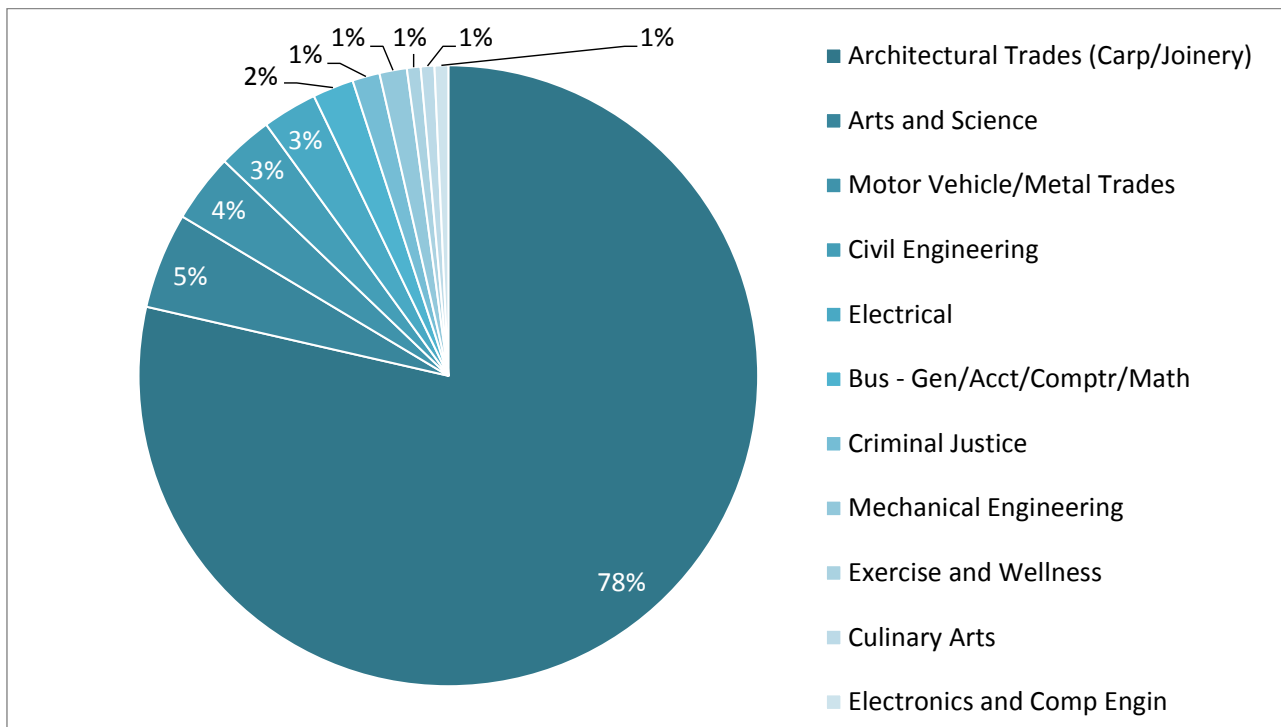


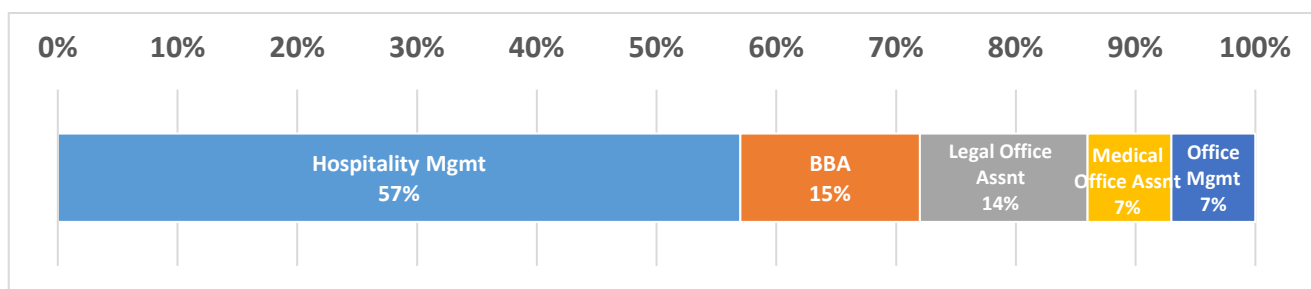
FIG. 5: Percent of DC Carpentry Students Who Returned to Camosun College



DC students who participated in a trades program were less likely to have returned for further post-secondary training within one year of completing their training due to work place training requirements. The majority of returning DC Automotive students (86%, n=45) enrolled in further trades training (Figure 2), primarily in additional Automotive levels (58% of those who did additional trades training), but also in Plumbing, Welding, Sheet Metal, and Heavy Mechanical trades. 78% (n=110) of returning DC Carpentry students returned to take further training in Carpentry or Joinery (Figure 5) followed by Arts and Science, Motor Vehicle or Metal trades, Civil Engineering and Electrical.

More than half of returning DC Professional Cook students (55%, n=45) enrolled in further levels of Cook training in post-secondary (shown under Trades in Figure 2; the remaining 9% of Trades students took other Trades programs). Of interest are the 17% (n=14) who went into Business programs (Figure 6). Of those, 57% (n=8) participated in Hospitality Management programs and fewer yet returned to take specific office assistant and management programs.

FIG. 6: Professional Cook to Business Deal



Transition

This section reviews ITA and STP data on transition and achievement of SIP DC students. These data provided a broader picture of the transition of SIP DC students with some limitations (STP datasets do not detail post-secondary credentials earned). It should be noted that making comparisons between datasets is limited.

ITA Transition Data

The ITA identified 1,302 individual students who participated in a SIP DC trades program. These students would have taken either a trade’s foundation program or Apprenticeship Level 1 program or completed an assessment through the SIP. This number differs from the 1,475 trades (ACE-IT) students identified by Camosun College.

This difference may have originated from the fact that Camosun College dataset reports registrations, which could include the students who may have withdrawn during the program, or who may have taken more than one program. However, a future further analysis may provide more insights into the differences.

Table 8 shows the makeup of DC trades enrolments by discipline. These data included secondary students reported by School Districts 61, 62, 63, 64, and 79 to the ITA during the study timelines. These students participated in the Accelerated Credit Enrolment in Industry Training (ACE-IT) program funded by the ITA. Students registered in ACE-IT programs are issued a Trades Worker Identification (TWID) number and are accounted for in the ITA data collection systems.

Carpentry was the most popular trade among the DC students in the study, followed by Automotive, Cook, Welding and Electrical. Participation/ enrolment rates

were attributed to the length of time the program was offered, the number of seats or training spaces available and students' interest, which varied from year to year depending on programs offered at individual secondary schools.

Of the 1,302 students, 125 (approximately 10%) returned to Camosun for non-trades educational opportunities (as per Camosun College data), while 647 individuals (50%) completed further trades training. The majority of the 647 returned exclusively to Camosun College for additional trades training. Of the 647, only 16 % of those who took further Apprenticeship levels (n=104) did so at Camosun College and at least one other institution, including the British Columbia Institute of Technology, Thompson Rivers University, North Island College, Vancouver Island University, and others. The following ITA credentials were earned by the 1,302 students:

TABLE 8: Trades (ACE-IT) Enrolment by Discipline from ITA Data (as of August 2016)

Discipline	Number of Students	Percentage
Carpentry	308	24%
Auto	223	17%
Welding	190	15%
Cook	188	14%
Electrical	176	13%
Joinery	70	6%
Plumbing	61	5%
Sheet Metal	29	2%
Heavy Mechanical	34	2%
Piping	16	1%
Horticulture	7	1%
TOTAL	1,302	100.00%

Source: Industry Training Authority

- 355 Certificates of Completion in all trades (granted by the ITA when students successfully complete³ a foundation program);
- 375 Certificates of Apprenticeship for all trades (granted when an apprentice completes all required workplace hours);
- 485 Certificates of Qualification (granted upon successful completion of all levels of training in a trade, achieving all required workplace hours and a minimum grade of 70% on a standardized certificate of qualification exam);
- 218 Red Seals for all trades (granted upon successful completion of all levels of training in a trade, achieving all required workplace hours and a minimum grade of 70% on a standardized certificate of qualification exam and interprovincial exam).

STP Transition Data

Of the 3,583 individual DC students during the period from September 1, 2005 to August 31, 2015, 2,112 individuals (59%) went on to further post-secondary studies following high school graduation (Table 9) as of September 2016 when the data was collected. Since some SIP DC courses – such as TASK and TEAC – are relatively new, and others – such as Accounting – have only recently begun attracting students, many students had not yet returned/ transitioned within the study time frame. Thus, the overall transition rate will be higher:

Of the 3,538 individual DC students during the period from September 1, 2005 to August 31, 2015, 2,112 individuals (59%) went on to further post-secondary studies following high school graduation.

Camosun College DC transition data indicated that the majority of students who returned for further post-secondary education did so within four years (Tables 5 and 6). A further study may be appropriate in 2019 to get a more accurate picture of DC transition for this group of students.

Besides 1,309 students returning to Camosun, almost a third of all returning students (803 students) transitioned to other institutions (Table 9). The difference of the STP numbers from the Camosun College retention numbers (1,414 students; Table 5) may be explained by the data collection cut-off dates – September 2016 for STP data, and November 2016 for Camosun College data.

Given the high rate of transition to other post-secondary institutions, providing access to post-secondary at other institutions could be another criterion of the achievements of DC programs. The STP data indicated that the three most popular post-secondary destinations of the DC students were on Vancouver Island, which may imply the importance of geographic proximity to the post-secondary institution of choice, and the need for communication between post-secondary institutions regarding DC student transitions.

³ “Successful completion” means achieving a final grade of 70% or higher.

TABLE 9: Students' Post-Secondary Destinations after Dual Credit, Number and Percent.

Institution	Number of Unique Students	Percentage of All Transitions
Camosun College	1,309	62%
University of Victoria	439	21%
Vancouver Island University	135	6.5%
Other ⁴	63	3.0%
University of British Columbia	51	2.5%
British Columbia Institute of Technology	43	2.0%
Justice Institute of British Columbia	28	1.3%
Thompson Rivers University	23	1.1%
Simon Fraser University	21	1.0%
Total	2,112	100%

Source: Student Transitions Project

Certificates (73%), bachelor's degrees (15%) and diplomas (9%) were the most common types of the 1,027 credentials earned by former DC students at the various post-secondary institutions they later attended, according to the STP data (Table 10).

TABLE 10: Percentage of Credentials Earned by the DC Students during the Study Period

Credential	Percentage
Certificate	73%
Bachelor's Degree	15%
Diploma	8.9%
Associate Degree	1.7%
Advanced Diploma	0.6%
First Professional Degree	0.5%
Master's Degree	0.2%
Advanced Certificate	0.1%
Total	100%

Source: Student Transitions Project

In terms of the disciplines in which the credentials were earned, the largest percent of credentials (60%) were issued for Construction, Mechanical, Precision Production and Transportation category accounting for the Trades certificates earned (Table 11). Other disciplines constituted a much smaller percentage: Applied Sciences (7%), Health Sciences (6%), Commerce and Administration (6%) and others.

The credentials of the 2,112 students identified by the STP who transitioned to further post-secondary education did not include credentials issued by the ITA, i.e., certificates of apprenticeship, certificates of qualification, or interprovincial red seal certificates. These are not accounted for in the STP data. Combining the data on credentials from both STP and ITA, 1,730 credentials were earned by the 3,583 DC students as of September 2016.

⁴ "Other" refers to institutions which had fewer than 10 former DC students enrolled and were categorized together to protect the privacy of enrollees. The institutions included Douglas College, Capilano University, Emily Carr University, Kwantlen Polytechnic University, University of the Fraser Valley, North Island College, and others.

TABLE 11: Breakdown of Credentials by Discipline of Study

Discipline	Percentage
Construction, Mechanical, Precision Production and Transportation	60%
Applied Sciences	7%
Commercial and Administration	6%
Health Sciences	6%
Personal and Culinary Services	5%
Humanities and Social Sciences	5%
Sciences	5%
Law	2%
Education	1%
Fine and Performing Arts	1%
Human Services	1%
Total	100%

Source: Student Transitions Project

Opportunities for Similar Studies in the Province

This project examined DC student performance and pathways through the SIP at Camosun College. Having considerable data at the partnership level as well as at the college level allowed for a smoother data linkage process with the STP and ITA data. Similar studies at other school districts and post-secondary institutions could possibly rely on the STP and ITA data, as well as school district and post-secondary student data (Appendix 2 provides examples of data request agreements with STP and ITA). However, without significant partnership and institutional data, replication of this study at other institutions could pose challenges.

For post-secondary institutions that are interested in implementing DC courses or programs, the following procedures are recommended.

- Organize a separate department which oversees DC (in this case, the SIP), rather than schools or school districts making arrangements through individual faculties, for student success and progression tracking purposes;
- Before enrolling DC students, discuss with the registrar’s office how students will be coded in the student records system. A separate identifier for DC students (similar to the way that International students are coded) allows the DC department and the registrar’s office to track DC student progress, retention, and mobility;
- Early in the process, set up a reliable data collection system that 1) is capable of handling large amounts of data, 2) can generate grade reports for the secondary schools involved, 3) links the DC department records with the institution’s overall student records system, and 4) can be compatible with provincial datasets (e.g., STP and/or ITA). This format facilitates consistent tracking of student progress, retention, and mobility within the institution. This process is valuable on its own, but even more so when researching along with external datasets; and
- Review statistics on a regular basis, preferably annually, in order to identify trends in enrolments (such as popular program and course areas and which subject areas could be further developed), and to identify emerging needs, successes, and future goals of the DC department.

If an institution has been offering DC for some time and has not implemented similar set-up suggestions, there may be challenges in doing so after the fact. These chal-

Challenges can be overcome but could drain resources until more efficient tracking and reporting mechanisms are established.

Study Challenges

There were some challenges in completing this project. Few of the challenges were insurmountable, but these should be considered, if another institution or organization wishes to undertake a similar project in the future.

- The approval process to receive the external data takes considerable time. Several forms were submitted to gain the necessary approvals, and a number of phone meetings were held to clarify which data were needed to answer research questions. Future researchers should consider the number of data sources and budget sufficient time for necessary approvals;
- The amount of time and resources the project required could be a challenge. While the results are valuable and should inform future policy and program development, the resources required to undertake similar projects should be carefully assessed;
- Data matching of Personal Education Numbers (PENs) and Trades Worker Ids (TWIDs) was a challenge, as the STP uses PENs but not TWIDs, while the ITA uses TWIDs but not PENs. The College records TWIDs if they are provided by the student at the time of registration. In the case of ACE-IT (DC trades students), students do not have a TWID at the time of registration; and
- Combining data from multiple external (STP, ITA) and internal dataset (secondary and post-secondary data) could be challenging, as each dataset can have a different format, construction, inquiry process, data labels, and data specifications. The ability to work with large datasets is crucial.

- Data requests for external data require significant consideration of research questions, especially when balancing the need for data privacy protection and the level of data specifics needed for the analysis.

Future Research Suggestions

Researching the topic of DC success and transition led to ideas of many other avenues, which could be pursued in the future, including, but not limited to, the following:

- Creating a profile of a typical DC student (secondary school grades, gender, program/ course);
- Performance of DC students by program/ discipline, delivery model, and received credential. The post-secondary performance could also be compared to non-DC students;
- Impacts of DC programs on post-secondary and secondary institutions (e.g., workloads; processes; fiscal models and sustainability; development of new educational or delivery methods, or learning pathways);
- DC students' experiences and perceptions of their DC program and future pathways;
- Tools for recruitment of DC students in trades and non-trades programs;
- A deeper analysis of the differences in the datasets used in this study to provide recommendations on how to reconcile/ explain the differences and their limitations for future studies of this kind; and
- Reconciling the differences in the ITA and Camosun College data used for this study.

Conclusions

This study explored SIP dual credit student enrolment, achievement, and transition over ten academic years (2005 – 2015). A number of conclusions may be drawn from this analysis of the data:

- 3,583 secondary students participated in DC options in the South Island during the study period.
- The SIP experienced continuous growth over the period of the study serving more students annually and offering an increasing diverse variety of transition program choices.
- Around 88% of non-trades students had passing grades, the rest either withdrew (5%) or failed (6.5%). Also, 68% of Trades students had passing grades in their DC program/ courses. TEAC, Health and Technology courses and programs had the highest percent of students with grades >50% among all disciplines.
- Around 60% of DC students transitioned to further post-secondary studies after completing their DC courses or programs at Camosun College and other institutions. Because SIP DC is a relatively new entity in the post-secondary world, this rate cannot reasonably be compared to provincial data, which has many years of longitudinal research to track progress over an extended period of time.
- In this case study, 62% of DC students who transitioned to further post-secondary education did so at the originating institution. This suggests that institutions that offer DC opportunities are likely to have high retention rates post-DC. DC students registered in Biology were most likely to return to post-secondary.

- DC students typically transitioned to the same post-secondary areas of study that they were involved in for their DC program, e.g., 86% of Automotive students who returned participated in further trades education, and 65% of returning Accounting students chose Business programs at Camosun. The higher likelihood of transitioning to similar programs may make post-secondary enrolment planning more predictable.
- The majority of credentials earned by DC students were certificates (73% of all credentials). The majority of the certificates earned by the DC students were in the field of Construction, Mechanical, Precision Production and Transportation.

Opportunities for similar studies in BC post-secondary institutions include the data available through provincial databases to track student transitions beyond a single post-secondary institution. Challenges include the amount of time and resources to obtain the necessary data, as well as the difficulty to match STP and ITA data. A matching of Trades students' TWID's and PEN's could offer greater opportunities for a nuanced analysis of students' transition in trades. Further research on the success of DC students could focus on student performance by program/ discipline or delivery model, as well as DC students' experiences and perceptions of their DC program and future pathways.

62% of DC students who transitioned to further post-secondary education did so at the originating institutions, suggesting that institutions that offer DC opportunities are likely to have high retention rates post-DC.

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Appendix 1:

BC Ministry of Education Policies on Dual Credit

A) Policy Options for Earning Credits: The Graduation Program allows students to earn credits toward graduation for “other” learning... Students are entitled to receive “dual credit” for post-secondary courses that lead to a credential from a post-secondary institution. “Dual credit” means a student earns both graduation credit and credit at a post-secondary institution. Courses for which credit may be earned are listed in the BCCAT Transfer Guide, CTC Agreements and BC Public Post-Secondary Calendars. Example: Credit may be granted for a Gas Metal and Arc Welding course taught at a college (BC Handbook of Procedures for the Graduation Program 2015-16, p. 48).

B) Students are entitled to dual credit if they earn post-secondary credits for:

- A for-credit course that leads to a credential from a post-secondary institution that is a member of the British Columbia Transfer System (www.bccat.bc.ca), or
- A course that is offered in French in conjunction with Educacentre.

Any student presenting a transcript from one of the institutions listed in this section, showing successful completion of a for-credit post-secondary course that leads to a credential, is entitled to have that course count toward secondary school graduation. All such completed post-secondary courses count as elective Grade

12 level courses...Courses that qualify must lead to a post-secondary credential, including courses in certificate programs of one year or less, two-year diploma programs and full degree programs. (BC Handbook of Procedures for the Graduation Program 2015-16, p. 57).

C) External Dual Credit Post-Secondary Courses: A student who presents the school of record with a transcript from one of the post-secondary institutions listed in this section, showing successful completion of a for-credit post-secondary course that leads to a credential, is entitled to have that course count toward secondary school graduation. All such courses count as elective courses at the Grade 12 level (BC Handbook of Procedures for the Graduation Program 2015-16, p. 78).

D) Earning Credit through Equivalency, Challenge, External Credentials, Post-Secondary Credit and Independent Directed Studies – effective July 1, 2004 (current)

Credit from Post-Secondary Courses Policy: This policy describes how students earn credit towards graduation by earning credit for courses at specific Post-Secondary Institutions. It is aligned with the earlier sections on Equivalency and External Credentials.

1. Students are entitled to earn "dual credit" if they earn credit that leads to a post-secondary credential from a post-secondary institution which is a member of the British Columbia Transfer System or offered in French through Educacentre.
2. Post-secondary courses for which credit may be earned must be documented as follows:
 - a) listed in the most recent edition of the British Columbia Council on Admissions and Transfer Guide, or

- b) specified in individual Career Technical Centre (CTC) program agreements, or
 - c) included in a BC public post-secondary institution's calendar as a course leading to a credential of one year or less, a two-year diploma or a four year degree.
3. Applicable post-secondary level courses count towards the required number of Grade 12 level credits needed to satisfy graduation requirements.
 4. Procedures for earning dual credit
 - a) All post-secondary level courses will be reported using course codes listed in the online Course Registry.
 - b) For reporting and transcript purposes, schools must assign all credits earned at a post-secondary institution a letter grade and percentage. Provided a course consists of the standard number of hours for most courses offered at that post-secondary institution, such courses will be awarded four credits, regardless of the number of credits indicated on the post-secondary institution's transcript. However, if the course at the post-secondary institution is offered in modules, credits awarded should be proportionate to 4 credits for the whole course.
 5. Adult Basic Education (ABE) courses do not count for dual credit. For information on how to report these for credit toward graduation, see the online Course Registry (BC Ministry of Education website, 2016).

Appendix 2:

Data Request Agreements

Student Transitions Project (STP) Data Request

Source: Student Transitions Project (STP)

Request(s):

Type of data requested: **anonymized case - level** **case - level** **aggregate**

Explanation: Camosun College wishes to use anonymized case-level data for this project. We are proposing that Camosun submit to the STP a list of student PEN numbers for all former SIP students, and to then receive from the STP corresponding data in BC post-secondary institutions from the STP database, for the time period of 2003-04 to 2015-16. Camosun College is a public post-secondary institution with the authority to collect and use Personal Education Numbers. As part of various data sharing agreements, Camosun College staff use Personal Education Numbers to perform a variety of data analysis and this allows the use of masked, anonymized data, which is a key component to data security.

The purpose and intention of this work is to map student transitions from the South Island Partnership at Camosun to other post-secondary activity in British Columbia. The data analysis will explore patterns and trends in the student mobility across British Columbia post-secondary institutions.

Time period of interest: From September 2004 to December 2015

Conditions:

- 1) Access will be given only to data elements approved for access by the STP Steering Committee.
- 2) Access to the data will be limited to a term decided on a case-by-case basis. Any request for extension of the duration of access will be made in writing to the STP Secretariat.
- 3) Users will not attempt to identify an individual through STP data by any means, whether by personal identifier (e.g. Provincial Education Number or student number) or by other known characteristics of an individual. Reports, papers or any other works will be written and/or presented in such a way that no individual can be identified in accordance with government policy for reporting on small populations.
- 4) Physical security at the premises [where data will be stored/accessed] will be maintained by ensuring that the premises are securely locked, except when the user(s) identified in Part A [the researchers] are present. Upon the expiry of the [identified] time period users will delete the STP data from all storage media and submit a Compliance Certificate to the STP Secretariat certifying that the data have been deleted.
- 5) Users intending to publish a report utilizing STP data will provide a copy of the draft report to the Steering Committee, along with a description of how STP data has been used in the report. Where the report identifies individual post-secondary institutions, the user publishing the report will also provide a copy.

of the draft report, along with a description of how the STP data was used, to each of the Registrars of the post-secondary institutions identified in the report. The Steering Committee and Registrars will have at least 14 calendar days to review the draft report and methodology and provide comments before the final report is published. All published reports utilizing STP data must indicate the source of the data; the date upon which the data was obtained and details about how the data was used; and the name of the organization responsible for the report.

- 6) The Steering Committee reserves the right to require that a disclaimer be inserted into the published final report indicating that the interpretation of the data and the views expressed in the report do not necessarily reflect those of the Steering Committee.
- 7) Storage media on which STP data resides, and account information that enables access to the data, will be sufficiently safeguarded to prevent unauthorized users from accessing the data. Security provisions must meet BC government standards outlined at: <http://www2.gov.bc.ca/gov/content/governments/services-for-government/information-management-technology/information-security>

Industry Training Authority (ITA) Data Request

Source: Industry Training Authority (ITA)
Request(s): Camosun College requests SIP student ACE-IT program student apprenticeship and completion data from the ITA. Records are requested for all ACE-IT students as per a list of PENs provided by from Camosun College who completed a trades program while also in high school.
Conditions: Before approving the request the ITA must know that all of the following conditions are met: <ol style="list-style-type: none">1) the research purpose cannot reasonably be accomplished unless that information is provided in individually identifiable form,2) the information is disclosed on condition that it not be used for the purpose of contacting a person to participate in the research,3) any record linkage is not harmful to the individuals that information is about and the benefits to be derived from the records linkage are clearly in the public interest,4) Camosun understands and agrees that it is solely responsible to ensure:<ol style="list-style-type: none">i. security and confidentiality of the information provided;ii. the removal or destruction of individual identifiers at the earliest reasonable time;iii. the prohibition of any subsequent use or disclosure of that information in individually identifiable form without ITA's express authorization.

Appendix 3:

Dual Credit Delivery Models

All in Secondary School

Description: Secondary school delivery by secondary school teacher. (no longer offered)

Examples: SPEX (Sport and Exercise) 110

Result: College awards discretionary credit.

Blended Delivery

A) School to College

Description: The high school portion of the program or course is delivered by a secondary school teacher in the high school, and the student transitions to the College to complete the program with a Camosun College instructor. Courses in this model may be offered to students from grades 10 to 12, therefore prerequisites are modified to adapt to students who are currently completing high school courses.

Examples: Carpentry, Automotive, Electrical, TASK (Trades Awareness, Skills, & Knowledge)

Result: Upon completion, student is awarded Dual Credit for the College portion and recognition for program completion. While still attending or after completing high school, students often transition from TASK into specific trades programs (e.g. Electrical, Carpentry)

B) Cohort in Secondary School (High School/Camosun College collaboration)

Description: The paired high school portion of the program or course is delivered at the high school by a secondary school teacher and the College portion is delivered at the high school by a Camosun College instructor. Prerequisites are modified to adapt to students who are currently completing English 12 or Math 12.

Examples: Psychology 12 + PSYCHOLOGY 130; Law 12 + CRIMINAL JUSTICE 154; Art 12 + ART 120

Result: Upon completion, the student is awarded Dual Credit for the College portion. The student transitions to the College to complete the program or related courses (e.g. Certificate or Diploma in Health, Diploma in Criminal Justice, Bachelor's Degree in Law Enforcement Studies, Visual Arts Diploma).

C) Cohort Online (High School/Camosun College collaboration)

Description: The paired high school portion of the program or course is delivered by a secondary school teacher and the College portion is delivered by a Camosun College instructor, either online or via live-feed video links. Students interact with the instructor and complete assignments online. Prerequisites are modified to adapt to students who are currently completing English 12 or Math 12.

Examples: Accounting 12 + ACCOUNTING 110; Economics 12 + ECONOMICS 103; Marketing 12 + MARKETING 110; Information Technology 12 + Electronics 138

Result: Upon completion, the student is awarded Dual Credit for the College portion and the high school portion. The student transitions to the College to complete related programs (e.g. Business Administration Diploma, Degree, or Post-Degree Diploma; Computer Network Electronics Technician Certificate).

All in College Models

A) Individual (one-off)

Description: Individuals attend the College and participate in a program or course among a class of adult learners. All prerequisites must be met before admission is granted.

Examples: PRACTICAL NURSING 1010, HEALTH 110, EARLY LEARNING & CARE*, BUSINESS 140*

Result: Upon Successful completion, the student is awarded College credit and elective credit at the high school. Following high school completion, the student transitions to the College to complete related programs (e.g. Practical Nursing, Health Care Assistant, Business Administration Diploma). *Individual courses may be in the classroom or online.

B) Satellite (High School location, Camosun instructor and College content)

Description: Classes are offered outside the school timetable (after school hours) at Neighbourhood Learning Centres (NLCs) or secondary schools. Students can participate as individuals in a mixed class of adult learners, or cohorts can be arranged.

Examples: Criminology 154 at Frances Kelsey Secondary; Business 140 at Belmont NLC

Result: Upon completion, the student is awarded Dual Credit for the College portion and the elective credit at the high school. The student transitions to the College to complete related courses or programs (e.g. Diploma in Criminal Justice, Bachelor's Degree in Law Enforcement Studies, Business Administration Diploma).

