DOCUMENT RESUME

ED 481 039 JC 030 486

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TITLE	The Class of 1996 Five Years after Graduation: Comparing BC University Outcomes for Direct Entry and Transfer Students.
INSTITUTION	British Columbia Council on Admissions and Transfer, Vancouver.
SPONS AGENCY	British Columbia Ministry of Advanced Education, Training and Technology, Victoria.
PUB DATE	2003-04-00
NOTE	41p.; Support also provided by the University Presidents' Council.
AVAILABLE FROM	For full text: http://www.bccat.bc.ca/pubs/univoutcomes.pdf.
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Evaluative (142)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	* Educational Benefits; Community Colleges; *Higher Education; *Postsecondary Education; Postsecondary Education as a Field of Study; Public Education; *Transfer Programs; *Transfer Students; Two Year Colleges
IDENTIFIERS	British Columbia; Canada; Simon Fraser University (Canada); University of British Columbia (Canada); University of Northern British Columbia; University of Victoria BC

ABSTRACT

This document discusses findings from a 2001 telephone survey of 8,613 students from the 1996 class of four British Columbia Universities. Only students who had entered a British Columbia University directly from a British Columbia secondary school or transfer students from a British Columbia college were used in the analysis of data. Fifty-three percent of the eligible 3,468 students were graduates who had entered a university directly from secondary school, while 47 percent had transferred into a university from a college. The study consisted of a comprehensive telephone survey with questions focused primarily on overall academic experience, further education beyond the bachelors degree, funding and debt load, graduate's labor market experience, and their social engagement. The most important finding from this study is that on important outcomes (such as satisfaction with the university experience, continuation of studies, low employment rates, salaries, and social engagement), there were no major differences between direct entrants and college transfers. This shows evidence for the success of the college transfer system as a viable route toward baccalaureate degree completion. Recommends further analyses for possible differences in outcomes between direct entrants and college transfer students. (Contains 39 tables, 2 figures, and 3 references.) (JS)

The Class of 1996 Five Years after Graduation: Comparing BC University Outcomes for Direct Entry and Transfer Students

April 2003

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Prepared for the:

BRITISH COLUMBIA COUNCIL ON ADMISSIONS & TRANSFER

SUPPORTING BC's EDUCATION SYSTEM

2001 B.C. University Baccalaureate Graduate Surveys

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This Report is also available
in Adobe Acrobat Portable Document Format (pdf),
from BCCAT Online, the Internet service of the
BC Council on Admissions and Transfer:
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Executive Summary

The diversity of British Columbia's post-secondary system is exemplified by the college transfer process. Individuals wanting to complete bachelors degrees and who are ineligible for direct entry or who choose not to enter university directly can instead complete the first one to two years of their coursework at a college or university college. Although significant attention has been given to this process, there has been no research comparing the outcomes of this baccalaureate education for direct entrant and college transfer graduates.

In 2001, The University of British Columbia, Simon Fraser University, the University of Victoria, and the University of Northern British Columbia, together with the University Presidents' Council and the BC Ministry of Advanced Education, partnered to survey the 1996 graduates five years after they had completed their bachelors degrees (*2001 BC University Baccalaureate Graduate Survey, 2003)*. The study consisted of a comprehensive telephone survey, with questions focused primarily on overall academic experience, further education beyond the bachelors degree, funding and debt load, graduates' labour market experience (e.g., salary, nature of occupation), and their social engagement (e.g., volunteerism, community involvement, and charitable donations). Further to this study, an analysis was conducted on the same survey results but including only direct entrants from a BC secondary school or transfer students from a BC college. This report describes the results of the analysis.

The most important finding from this study is that on the most important outcomes (satisfaction with university experience, continuation of studies, low unemployment rates, salaries and social engagement), there were no major differences between direct entrants and college transfers. This study provides concrete evidence for the success of the college transfer system as a viable route to baccalaureate degree completion.

Overall, 53% of the respondents were graduates who had entered university directly from secondary school, compared to 47% who had transferred into university from a BC institute, college or university college. The majority of college transfers had come from a Lower Mainland institution (the top three being Kwantlen University College, Capilano College and Douglas College), and very few from distant colleges such as Northern Lights College and Northwest Community College or from BCIT. Consistent with current gender ratios at BC universities, approximately 60% of respondents from both groups were female, although the college transfer group was 2.8 years older than the direct entrants. The results indicated that college transfer was the more common route for graduates with disabilities and Aboriginal students, whereas visible minorities were almost twice as likely to have entered university directly.

Most direct entrants and college transfers had completed bachelors degrees in the Social Sciences, the college transfer group to a greater extent (37%, compared to 28% of direct entrants). This was juxtaposed by approximately three times more direct entrants than college transfers having completed degrees in Computing Science, Life Sciences or Physical Sciences. Very few of the survey participants had taken co-operative education as part of their degree program, particularly the college transfer group (7%, compared to 11% of direct entrants).

According to the survey results, 91% of both groups felt that their life, aside from their job, was different as a result of their university experience, and 96% indicated that they were satisfied with their university education. Despite the strong endorsement, only 71% of direct entrants and 72% of college transfers would select the same program again, lack of career opportunities and difficulty finding a job being the most common reason provided (30% direct entrants; 33% college transfers).

Approximately 90% of graduates from both groups had taken some form of further education in the five years since completing their degrees, largely for career-related reasons, and more direct entrants (23%) than college transfers (18%) were pursuing another university degree (bachelors or graduate). Of those who were continuing their studies at the time of the study, significantly more direct entrants were studying full-time (47%, compared to 33% of college transfers), and universities were the most common location of further education for both groups of graduates, college transfers to a somewhat lesser extent (48%, compared to 53% of direct entrants).

The greatest differences between the two groups emerged in the area of student financing and debt. When asked about their primary source of funding, the majority of both direct entrants and college transfers identified employment (36% direct entrants; 33% college transfers); however, a far greater percentage of college transfers used student loans to cover the cost of their education (32%, compared to 16% of direct entrants). More of the college transfer group had incurred some amount of debt to obtain their bachelors degree (55%, compared to 35% of direct entrants), and the average debt load for those college transfers who had debt was $5,500 higher. Five years after graduating, 7% more college transfers than direct entrants had student loans left to repay, with the average amount being approximately $2,500 higher.

Labour market outcomes proved to be another area where some interesting differences emerged between direct entrants and college transfers. Both groups had lower rates of unemployment than the national average of 7.6%, especially the college transfers (3.2%, compared to 4.1% of direct entrants). For direct entrants, the most common reason cited for unemployment was having lost or quit their job (27%), while the largest group of unemployed college transfer respondents indicated that they couldn't find work/lack of opportunities (24%). Of the respondents who had chosen not to work, the overwhelming majority said that they were going to school full-time, the direct entrants to a much greater extent (54%, compared to 32% of college transfers). On the other hand, more college transfer respondents were caring for children full-time (19%, compared to 10% of direct entrants), and more were on a leave/maternity leave (17%, compared to 9% of direct entrants).

The survey data also showed that the direct entrants had slightly higher salaries, albeit a very small difference that may have been more related to their academic averages in secondary school than to their entry route to university. There was no evidence that the salary differences was the result of disciplinary choices.

Furthermore, the survey data revealed a greater movement of direct entrants than college transfers into professional occupations by the time of the survey (69% direct entrants, 63% college transfers). And while slightly fewer college transfers said that their job required a bachelors degree (65% direct entrants, 62% college transfers), more felt that their job was "very related" to the program from which they had graduated (39%, compared to 34% of direct entrants).

Education has been shown to be the best predictor of civic participation (Ehrlich, 2000), and graduates' level of social engagement can be considered an important outcomes measure for our higher education system. The survey examined the extent to which graduates were socially engaged through volunteering, community involvement, and making charitable donations. More of the college transfers had volunteered in the year prior to the survey (59% compared to 55% of direct entrants), and more credited their university education with motivating them to "some extent" or "a great extent" to volunteer (44% vs. 38%). Approximately ¾ of both groups had made charitable donations in the past year, the average donation for direct entrants being $76 higher. Overall, both direct entrant and college transfers showed very high levels of social commitment.

This survey report concludes with some suggestions for further research.

Summary Table

	Direct Entrants	College Transfers
All Respondents	53%	47%
Demographics		
Female	59%	61%
Mean age at time of survey	29.7	32.5
With disabilities	3%	6%
Aboriginal	1%	3%
Visible minorities	30%	17%
Programs		
Humanities and Social Sciences	39%	52%
Sciences and Engineering	29%	12%
In co-op program	11%	7%
Very satisfied with education	32%	38%
Outcomes		
Pursuing further degree	23%	18%
Graduated with debt	36%	45%
Average debt at graduation	$14,931	$20,465
Volunteered in previous year	55%	59%

I. Introduction

Prior to 1965, higher education in British Columbia was provided by The University of British Columbia, Notre Dame University, and Trinity Junior College. In 1962, the *Macdonald Report* recommended the expansion of BC's post-secondary system to include two-year colleges which offered a variety of programs, ranging from technical and vocational programs to academic courses equivalent to those offered at a university. In addition to providing diverse educational

opportunities, BC's community colleges were to be located throughout the province in order to be accessible to as many people as possible. In 1965, Vancouver City College became BC's first public college, and by 1970 seven more colleges had been established in communities as far-reaching as Castlegar, Kamloops, Kelowna, Prince George, and Nanaimo, most of which had satellite campuses in nearby communities (Dennison & Gallagher, 1986). In the 40 years since the *Macdonald Report* was written, BC's public post-secondary system has evolved to include five universities, five university colleges, 11 colleges, five institutes, and the Open Learning Agency. Throughout this report, the word "college" is used as a generic term to refer to the diverse institutions that students can transfer from and include such institutions as colleges, university-colleges, institutes as well as the Open Learning Agency.

Since their inception, BC's college system has enabled students to begin their university-level studies with courses that the province's universities have articulated as being equivalent to their own. These courses, once successfully completed, then count towards the student's bachelors degree. While some differences exist among universities, college students enrolled in transfer programs typically complete 30-60 credits at college (equivalent to one to two years of full-time study, sometimes spread over a longer time period) before transferring to a university to complete their degree. Students undertaking degree programs at a university-college also have the opportunity to complete their degree requirements at that institution with no need to transfer to a university, although the range of degree completion programs is more limited. The college-university transfer process within BC has been closely scrutinized, and much has been written about its merits and challenges, from a student, curricular, and organizational perspective. However, up until now, no research has been carried out to compare the post-baccalaureate outcomes of students who entered university directly from secondary school with those who began their university studies at a college.

In 2001, The University of British Columbia, Simon Fraser University, the University of Victoria, and the University of Northern British Columbia, together with the University Presidents' Council and the BC Ministry of Advanced Education, partnered to survey the 1996 graduates five years after they had completed their bachelors degrees. The survey was designed to explore participants' assessment of their university experience, including their means of financing their education and debt load, as well as their post-graduate experience in areas such as further education, employment, and social engagement. As a follow-up to the initial study (*2001 BC University Baccalaureate Graduate Survey*, 2003), the data has been further examined to determine whether there are any outcome differences between direct entry and college transfer students. The results confirm the success of BC's diverse system of higher education and demonstrate the relatively equal success of graduates regardless of their entry point to university. At the same time, the data highlights some interesting differences between the two groups of students and suggests areas which would benefit from further investigation.

II. Survey Population and Response Rates

This report is based upon the feedback of the 1996 BC baccalaureate graduates five years after degree completion. The survey population included graduates from four BC universities: The University of British Columbia (UBC), Simon Fraser University (SFU), the University of Victoria (UVIC), and the University of Northern British Columbia (UNBC). The 2001 survey was conducted by telephone, and 88% of the graduates reached responded. The survey group consisted of 8,613 graduates, of whom 2,432 could not be reached; international students, Medical and Dental students and students living outside of North America were excluded. The results were analyzed and reported in *The Class of 1996 Five Years after Graduation* (2002).

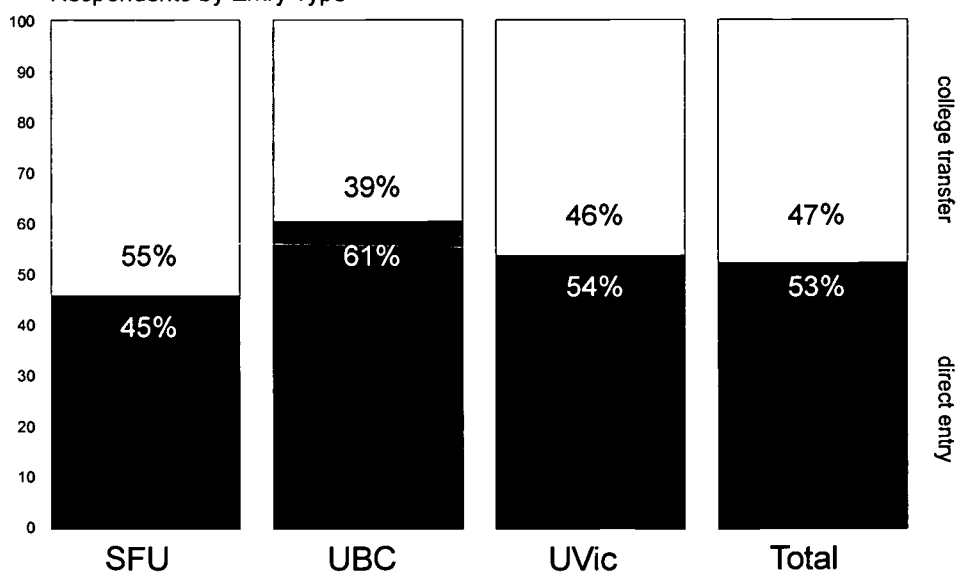
As a follow-up to the initial report, an analysis has been conducted to compare the post-baccalaureate experiences of students who entered university directly from secondary school (referred to in this report as "direct entrants") with those who transferred from a college (referred to as "college transfers"). This analysis will concentrate on the 1996 degree graduates who directly entered or transferred from a BC college or high school—3,468 students. UNBC students have been excluded from this analysis due to the small sample size of its graduates. Further details of the study (response rates, census frame, etc.) can be found in the major study *University Graduates Five Years After Graduation* (2002). The previous analysis of this ongoing project suggests no identifiable response bias.

III. Demographics

A. Institution

Overall, 53% of the survey participants are direct entrants, compared to 47% college transfers. When comparing the three universities, only SFU has more college transfer students than direct entrants, a reflection of the intake patterns prevalent in the early 1990's. UBC has the largest differential of 22 percentage points favouring direct entrants over college transfer students.

Figure 1:
Respondents by Entry Type



As highlighted in Table 1, BC's college system is expansive. Clearly, there is a wide range in size and scope of programs among these colleges, with some producing significantly more transfer students than others. In this survey the majority of college transfer participants came from Kwantlen University College (13.7% of the college transfer group), Capilano College (11.9%), and Douglas College (11.3%). Fewer respondents transferred from smaller, more distant colleges, such as Northern Lights College (0.7%), Northwest Community College (0.7%), and College of the Rockies (1.4%). It should be noted that in 1994, Langara College was established as a separate entity from VCC, and that students responding to this survey may have their college of origin coded as VCC, rather than Langara.

Table 1:
College Transfers
by BC College

BC College/Institute	# of survey respondents	% of survey respondents
BC Institute of Technology	17	1.0%
Camosun College	172	10.6%
Capilano College	194	11.9%
College of New Caledonia	63	3.9%
College of the Rockies	23	1.4%
Douglas College	184	11.3%
Kwantlen University College	223	13.7%
Langara College	107	6.6%
Malaspina University-College	81	5.0%
Northern Lights College	12	0.7%
Northwest Community College	12	0.7%
Okanagan University College	123	7.6%
Open University	48	2.9%
Other/Unknown	68	4.2%
Selkirk College	31	1.9%
University College of the Cariboo	68	4.2%
University College of the Fraser Valley	57	3.5%
Vancouver Community College	146	9.0%
Total	1,629	100.0%

Note: Students from colleges who transfer fewer than 10 students are included in "other/unknown".

B. Gender

Significantly more of the study participants are female, consistent with the current gender ratios at BC universities. The college transfer students have a slightly greater percentage of women (+2%) than do the direct entrants.

Table 2: Gender

Gender	Direct Entrants	College Transfer	Total (%)
Male (#)	750	633	1,383
Male (%)	40.8%	38.9%	39.9%
Female (#)	1,089	996	2,085
Female (%)	59.2%	61.1%	60.1%
Total	1,839	1,629	3,468

C. Age

As shown in Table 3, the college transfer study participants are markedly older than their direct entrant counterparts, and were therefore older when they completed their bachelors degrees in 1996. At the time of the study, the largest percentage of college transfers were aged 30-34 (45%), whereas the largest grouping of direct entrants was 25-29 (75%). Grouping respondents by range highlights the differences between groups. Direct entrants are much more likely to graduate in their mid-twenties while substantial numbers of college transfer students graduate five to 10 years later. The mechanisms for these differences are unclear but it is consistent with the findings that transfer students are older to begin with and are more likely to attend part-time.

Table 3: Age Range At Time of Survey

Age Range	Direct Entrants		College Transfer		Total	
20-24	1	0.1%	0	0.0%	1	0.0%
25-29	1,360	74.4%	568	35.0%	1,928	55.9%
30-34	347	19.0%	727	44.8%	1,074	31.1%
35-39	31	1.7%	140	8.6%	171	5.0%
40-44	24	1.3%	94	5.8%	118	3.4%
45-49	31	1.7%	58	3.6%	89	2.6%
50-54	19	1.0%	15	0.9%	34	1.0%
55+	14	0.8%	21	1.3%	35	1.0%
Total	1,827	100.0%	1,623	100.0%	3,450	100.0%
Mean Age	29.7		32.5		31.0	

It is not surprising that the college transfer survey participants are generally older. Since their inception, BC's colleges have attempted to make post-secondary education more accessible to a broader segment of the population. In addition to vocational/technical and university transfer programs, colleges have also provided academic upgrading courses which students sometimes must complete to be ready for university transfer courses. As a result, many students who were not admissible to university directly from secondary school (and in some cases who did not complete secondary school) have been able to upgrade their skills and then begin their university-level studies. Students such as these are then older when they complete their university degrees.

Furthermore, those students who do not have clear academic plans beyond secondary school often find community colleges more suitable environments to "try out" different courses and begin to formulate their post-secondary and career goals. It is not unusual for some students to spend several years in college transfer programs, and as time passes they are more likely to have work and family responsibilities which decrease the speed with which they move through their degree program. As well, mature students who return to post-secondary education after working and/or raising a family are often drawn to a college environment for its smaller class sizes and more individual support from faculty and support staff.

D. Equity Groupings

Included among the many individuals who have benefited from university transfer programs are persons with disabilities and Aboriginals. For most students, moving away from smaller home communities to attend university in a large urban centre is an intimidating prospect, both financially and emotionally. Perhaps to an even greater extent than other persons, students with physical and mental challenges rely upon strong support networks, and those who have to move away from home to attend university must re-establish these support systems. Furthermore, colleges tend to be smaller than universities, settings which some students with disabilities may find more physically accessible.

Table 4: Students with Disabilities

	Direct Entrants		College Transfer		Total	
No	1,775	96.8%	1,535	94.4%	3,310	95.4%
Yes	59	3.2%	91	5.6%	150	4.3%
Total	1,834	100.0%	1,626	100.0%	3,460	100.0%

Note: Specific question posed was "While you were in university, and to this day, do you have a long-term physical or mental health condition that limits the kind of activity that you can perform on a daily basis?"

For many Aboriginal students, maintaining close ties with their home communities is integral to their sense of well-being. Some come from very small and isolated areas of the province, and the opportunity to begin their university studies at a local college makes it more likely that they will pursue a bachelors degree. In addition, some colleges offer bridging programs and preparatory courses which allow students to complete their secondary school requirements and

begin university transfer courses. For BC's Aboriginal community, which is working to improve the participation rates of First Nations people in higher education, such bridging programs are essential to reaching these goals.

Table 5: Aboriginal Students

	Direct Entrants		College Transfer		Total	
No	1,813	99.0%	1,579	97.0%	3,392	98.1%
Yes	19	1.0%	48	3.0%	67	1.9%
Total	1,832	100.0%	1,627	100.0%	3,459	100.0%

Note: Specific question posed was "Are you an aboriginal person? An aboriginal person is someone of native descent; that is, an individual who is either Inuit, Metis, or North American Indian - either status or non-status."

As seen in Tables 4 and 5, significantly more disabled and Aboriginal graduates began their post-secondary studies at a college. However, the trend changes markedly for visible minority graduates, who are almost twice as likely to enter university directly from secondary school.

Table 6: Visible Minorities

	Direct Entrants		College Transfer		Total	
No	1,289	70.5%	1,351	83.2%	2,640	76.5%
Yes	540	29.5%	273	16.8%	813	23.5%
Total	1,829	100.0%	1,624	100.0%	3,453	100.0%

Note: Specific question posed was "Are you part of a visible minority group in Canada? Some visible minority groups in Canada include individuals of African descent, East Asian [China, Japan, Korea], Southeast Asian [Thailand, Vietnam, Cambodia], Indo-Pakistani, or Middle Eastern."

It is not surprising that the proportion of visible minority students is higher among direct entrants. In many other countries, and some Canadian provinces, colleges do not offer courses which count towards the completion of a bachelors degree, and are often solely the providers of vocational and technical programs. As a result, the college transfer process is less familiar for many of BC's immigrant families. Moreover, census figures show higher concentrations of visible minorities in the regions near UBC and SFU than in those regions adjacent to many BC colleges outside the greater Vancouver area. To some extent, these cultural and geographic factors explain the differential in visible minority distributions, in addition to higher transition rates for visible minority students, particularly those of Chinese/Asian origin.

IV. Academic Program

A. Academic Program Taken

For both the college transfer and direct entry groups, the largest percentage of respondents completed degrees in the Social Sciences (28% of direct entrants; 37% of college transfers) (see Table 7). For college transfer students, the next largest program area is Education (17%), whereas for direct entrants it is Life Sciences (15%). For both groups, the Humanities is the third most common area. Direct entrants are three times more likely than college transfers to have undertaken degrees in Computing Science, Life Sciences, or Physical Sciences.

Table 7: Program Area

Academic Program Area	Direct Entry		College Transfer		Total	
Fine and Performing Arts	78	4.2%	47	2.9%	125	3.6%
Computing Science	60	3.3%	17	1.0%	77	2.2%
Engineering	84	4.6%	51	3.1%	135	3.9%
Education	159	8.6%	268	16.5%	427	12.3%
Law	5	0.3%	3	0.2%	8	0.2%
Health Professions	84	4.6%	58	3.6%	142	4.1%
Health, Fitness and Kinesiology	47	2.6%	68	4.2%	115	3.3%
Business	195	10.6%	119	7.3%	314	9.1%
Natural Resources	31	1.7%	22	1.4%	53	1.5%
Social Sciences	507	27.6%	604	37.1%	1,111	32.0%
Humanities	205	11.1%	242	14.9%	447	12.9%
Life Sciences	283	15.4%	96	5.9%	379	10.9%
Physical Sciences	101	5.5%	34	2.1%	135	3.9%
Total	1,839	100.0%	1,629	100.0%	3,468	100.0%

Although the data do not explain these differences, there are aspects of the university transfer process which may influence the curricular choices students make. For most universities, Humanities and Social Sciences programs are relatively flexible in their course requirements, particularly in the first year, and college transfer students should have few difficulties putting together a complete program. In contrast, university transfer students in Science and Engineering programs have more specific course requirements which may not be fully available at all colleges. This challenge is compounded for students who are trying to maintain as many options as possible with respect to both their degree program and the university to which they will transfer. As such, some students simply find it easier to complete the requirements to transfer in a Humanities or Social Sciences degree program.

Another complicating factor for some first year transfer students is the registration process, with most colleges giving priority registration on a first come, first served basis (exceptions include Capilano College, where priority registration is based upon entering academic averages). If an individual applies late in the admissions cycle, as is sometimes the case for secondary students who had planned to attend university but weren't admitted, then he or she may find many of the primary transfer courses full. This can be particularly challenging for students wanting to transfer into very specific programs such as Engineering. To help mitigate against such problems, some universities and colleges have worked together to develop specialized

transfer programs (e.g., Kwantlen University College's UBC Engineering Transfer Program; Capilano College's UBC Commerce Transfer Program). In addition, most colleges and university colleges offer all the courses needed in the first two years of SFU's Criminology Program. Because enrollment in these programs is limited, students who gain university admission generally have fewer problems obtaining required courses.

Table 8: Program Area and College Count

	Fine and Performing Arts	Computing Science	Engineering	Education	Law	Health Professions	Health, Fitness and Kinesiology
BC Institute of Technology	1	-	7	2	-	2	-
Camosun College	5	2	8	22	-	16	3
Capilano College	6	1	1	22	-	4	7
College of New Caledonia	1	-	3	19	-	2	5
College of the Rockies	-	-	1	9	-	-	2
Douglas College	5	1	1	39	-	3	11
Kwantlen University College	3	3	9	34	-	5	2
Langara College	4	2	-	12	-	-	3
Malaspina University-College	7	2	1	11	-	1	5
Northern Lights College	1	-	-	2	-	-	-
Northwest Community College	-	-	-	2	-	-	-
Okanagan University College	2	2	4	29	-	5	2
Open University	1	-	-	11	-	2	4
Other/Unknown	4	1	-	11	1	2	1
Selkirk College	-	1	4	4	-	2	1
University College of the Cariboo	2	-	8	5	-	4	2
University College of the Fraser Valley	1	-	-	15	1	4	3
Vancouver Community College	4	2	4	19	1	6	17
Total College Transfers	47	17	51	268	3	58	68
Direct Entry	78	60	84	159	5	84	47

	Business	Natural Resources	Social Sciences	Humanities	Life Sciences	Physical Sciences	Total
BC Institute of Technology	1	1	2	-	-	1	17
Camosun College	12	1	71	18	11	3	172
Capilano College	18	4	82	35	10	4	194
College of New Caledonia	2	1	12	10	8	-	63
College of the Rockies	-	-	7	2	1	1	23
Douglas College	11	-	83	23	6	1	184
Kwantlen University College	21	1	98	36	7	4	223
Langara College	9	1	45	27	2	2	107
Malaspina University-College	4	-	31	10	5	4	81
Northern Lights College	-	-	1	8	-	-	12
Northwest Community College	2	2	1	3	2	-	12
Okanagan University College	15	4	30	9	18	3	123
Open University	1	-	16	7	4	2	48
Other/Unknown	5	1	28	9	2	3	68
Selkirk College	2	1	9	3	4	-	31
University College of the Cariboo	4	3	21	12	3	4	68
University College of the Fraser Valley	4	-	17	7	5	-	57
Vancouver Community College	8	2	50	23	8	2	146
Total College Transfers	119	22	604	242	96	34	1629
Direct Entry	195	31	507	205	283	101	1,839

Table 8 compares the programs from which college transfers graduated with the colleges they attended prior to university. Table 8a presents these data as percentage distributions, showing

the proportion of each college's transfer students who registered in each program. As reflected in the data, the larger colleges seem better equipped to "transfer" students in a wide range of program areas. In particular, the university colleges appear to have benefited from being degree-granting themselves, thereby attracting a more diverse range of faculty and having the resources to offer extensive academic programs. In comparison, graduates who transferred from some of the smaller colleges are few, and were from a limited range of program areas. For example, the 12 survey participants who began at Northern Lights College (main campuses in Dawson Creek and Fort St. John) were almost entirely graduates of Humanities (67%) or Social Sciences (8%) programs; there were no 1996 Science graduates within the survey group who began at this college.

Table 8a: Program Area and College:
Percent by Program Area

	Fine and Performing Arts	Computing Science	Engineering	Education	Law	Health Professions	Health, Fitness and Kinesiology
BC Institute of Technology	5.9%	0.0%	41.2%	11.8%	0.0%	11.8%	0.0%
Camosun College	2.9%	1.2%	4.7%	12.8%	0.0%	9.3%	1.7%
Capilano College	3.1%	0.5%	0.5%	11.3%	0.0%	2.1%	3.6%
College of New Caledonia	1.6%	0.0%	4.8%	30.2%	0.0%	3.2%	7.9%
College of the Rockies	0.0%	0.0%	4.3%	39.1%	0.0%	0.0%	8.7%
Douglas College	2.7%	0.5%	0.5%	21.2%	0.0%	1.6%	6.0%
Kwantlen University College	1.3%	1.3%	4.0%	15.2%	0.0%	2.2%	0.9%
Langara College	3.7%	1.9%	0.0%	11.2%	0.0%	0.0%	2.8%
Malaspina University-College	8.6%	2.5%	1.2%	13.6%	0.0%	1.2%	6.2%
Northern Lights College	8.3%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%
Northwest Community College	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%
Okanagan University College	1.6%	1.6%	3.3%	23.6%	0.0%	4.1%	1.6%
Open University	2.1%	0.0%	0.0%	22.9%	0.0%	4.2%	8.3%
Other/Unknown	5.9%	1.5%	0.0%	16.2%	1.5%	2.9%	1.5%
Selkirk College	0.0%	3.2%	12.9%	12.9%	0.0%	6.5%	3.2%
University College of the Cariboo	2.9%	0.0%	11.8%	7.4%	0.0%	5.9%	2.9%
University College of the Fraser Valley	1.8%	0.0%	0.0%	26.3%	1.8%	7.0%	5.3%
Vancouver Community College	2.7%	1.4%	2.7%	13.0%	0.7%	4.1%	11.6%
Total College Transfer	2.9%	1.0%	3.1%	16.5%	0.2%	3.6%	4.2%
Direct Entry	4.2%	3.3%	4.6%	8.6%	0.3%	4.6%	2.6%

	Business	Natural Resources	Social Sciences	Humanities	Life Sciences	Physical Sciences	Total
BC Institute of Technology	5.9%	5.9%	11.8%	0.0%	0.0%	5.9%	100.0%
Camosun College	7.0%	0.6%	41.3%	10.5%	6.4%	1.7%	100.0%
Capilano College	9.3%	2.1%	42.3%	18.0%	5.2%	2.1%	100.0%
College of New Caledonia	3.2%	1.6%	19.0%	15.9%	12.7%	0.0%	100.0%
College of the Rockies	0.0%	0.0%	30.4%	8.7%	4.3%	4.3%	100.0%
Douglas College	6.0%	0.0%	45.1%	12.5%	3.3%	0.5%	100.0%
Kwantlen University College	9.4%	0.4%	43.9%	16.1%	3.1%	1.8%	100.0%
Langara College	8.4%	0.9%	42.1%	25.2%	1.9%	1.9%	100.0%
Malaspina University-College	4.9%	0.0%	38.3%	12.3%	6.2%	4.9%	100.0%
Northern Lights College	0.0%	0.0%	8.3%	66.7%	0.0%	0.0%	100.0%
Northwest Community College	16.7%	16.7%	8.3%	25.0%	16.7%	0.0%	100.0%
Okanagan University College	12.2%	3.3%	24.4%	7.3%	14.6%	2.4%	100.0%
Open University	2.1%	0.0%	33.3%	14.6%	8.3%	4.2%	100.0%
Other/Unknown	7.4%	1.5%	41.2%	13.2%	2.9%	4.4%	100.0%
Selkirk College	6.5%	3.2%	29.0%	9.7%	12.9%	0.0%	100.0%
University College of the Cariboo	5.9%	4.4%	30.9%	17.6%	4.4%	5.9%	100.0%
University College of the Fraser Valley	7.0%	0.0%	29.8%	12.3%	8.8%	0.0%	100.0%
Vancouver Community College	5.5%	1.4%	34.2%	15.8%	5.5%	1.4%	100.0%
Total College Transfer	7.3%	1.4%	37.1%	14.9%	5.9%	2.1%	100.0%
Direct Entry	10.6%	1.7%	27.6%	11.1%	15.4%	5.5%	100.0%

Table 8b shows the proportion of students in each program who came from a particular college. As expected, larger colleges tend to transfer a higher proportion of students to each program area.

Table 8b: Program Area and College: Percent by College

	Fine and Performing Arts	Computing Science	Engineering	Education	Law	Health Professions	Health, Fitness and Kinesiology
BC Institute of Technology	2.1%	0.0%	13.7%	0.7%	0.0%	3.4%	0.0%
Camosun College	10.6%	11.8%	15.7%	8.2%	0.0%	27.6%	4.4%
Capilano College	12.8%	5.9%	2.0%	8.2%	0.0%	6.9%	10.3%
College of New Caledonia	2.1%	0.0%	5.9%	7.1%	0.0%	3.4%	7.4%
College of the Rockies	0.0%	0.0%	2.0%	3.4%	0.0%	0.0%	2.9%
Douglas College	10.6%	5.9%	2.0%	14.6%	0.0%	5.2%	16.2%
Kwantlen University College	6.4%	17.6%	17.6%	12.7%	0.0%	8.6%	2.9%
Langara College	8.5%	11.8%	0.0%	4.5%	0.0%	0.0%	4.4%
Malaspina University-College	14.9%	11.8%	2.0%	4.1%	0.0%	1.7%	7.4%
Northern Lights College	2.1%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%
Northwest Community College	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%
Okanagan University College	4.3%	11.8%	7.8%	10.8%	0.0%	8.6%	2.9%
Open University	2.1%	0.0%	0.0%	4.1%	0.0%	3.4%	5.9%
Other/Unknown	8.5%	5.9%	0.0%	4.1%	33.3%	3.4%	1.5%
Selkirk College	0.0%	5.9%	7.8%	1.5%	0.0%	3.4%	1.5%
University College of the Cariboo	4.3%	0.0%	15.7%	1.9%	0.0%	6.9%	2.9%
University College of the Fraser Valley	2.1%	0.0%	0.0%	5.6%	33.3%	6.9%	4.4%
Vancouver Community College	8.5%	11.8%	7.8%	7.1%	33.3%	10.3%	25.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	Business	Natural Resources	Social Sciences	Humanities	Life Sciences	Physical Sciences	Total
BC Institute of Technology	0.8%	4.5%	0.3%	0.0%	0.0%	2.9%	1.0%
Camosun College	10.1%	4.5%	11.8%	7.4%	11.5%	8.8%	10.6%
Capilano College	15.1%	18.2%	13.6%	14.5%	10.4%	11.8%	11.9%
College of New Caledonia	1.7%	4.5%	2.0%	4.1%	8.3%	0.0%	3.9%
College of the Rockies	0.0%	0.0%	1.2%	0.8%	1.0%	2.9%	1.4%
Douglas College	9.2%	0.0%	13.7%	9.5%	6.3%	2.9%	11.3%
Kwantlen University College	17.6%	4.5%	16.2%	14.9%	7.3%	11.8%	13.7%
Langara College	7.6%	4.5%	7.5%	11.2%	2.1%	5.9%	6.6%
Malaspina University-College	3.4%	0.0%	5.1%	4.1%	5.2%	11.8%	5.0%
Northern Lights College	0.0%	0.0%	0.2%	3.3%	0.0%	0.0%	0.7%
Northwest Community College	1.7%	9.1%	0.2%	1.2%	2.1%	0.0%	0.7%
Okanagan University College	12.6%	18.2%	5.0%	3.7%	18.8%	8.8%	7.6%
Open University	0.8%	0.0%	2.6%	2.9%	4.2%	5.9%	2.9%
Other/Unknown	4.2%	4.5%	4.6%	3.7%	2.1%	8.8%	4.2%
Selkirk College	1.7%	4.5%	1.5%	1.2%	4.2%	0.0%	1.9%
University College of the Cariboo	3.4%	13.6%	3.5%	5.0%	3.1%	11.8%	4.2%
University College of the Fraser Valley	3.4%	0.0%	2.8%	2.9%	5.2%	0.0%	3.5%
Vancouver Community College	6.7%	9.1%	8.3%	9.5%	8.3%	5.9%	9.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Clearly, the institution a student attends can have a pronounced impact on the degree he/she ultimately completes—an important outcome of post-secondary education.

B. Co-operative Education

Research and experience have shown the positive effects of co-operative education on the ability of graduates to succeed in the labour market, and BC's universities, particularly SFU and UVIC, have long been among the leaders nationally in their provision of co-op programs. However, relatively few survey respondents actually completed co-op as part of their bachelors degree (9% overall), particularly the college transfer group (7%). This low participation rate likely has some connection to the fact that the group graduated in 1996, prior to the more recent growth in co-op programs at all three universities. Furthermore, the difference in co-op participation between direct entrants and college transfers may have some relationship to their academic program, with more direct entrants having taken applied sciences, business, and sciences which have higher concentrations of co-op. Nevertheless, the question still remains as to whether these co-op opportunities are equally available to college transfer students, to which further investigation may provide some clarity. In particular, it would be helpful to explore whether those college students who transfer to a university in their 3rd year may have more difficulty entering a co-operative education program.

Table 9: Co-operative Education Programs

	Direct Entrants		College Transfer		Total	
No	1,630	88.6%	1,512	92.8%	3,142	90.6%
Yes	209	11.4%	117	7.2%	326	9.4%
Total	1,839	100.0%	1,629	100.0%	3,468	100.0%

Students transferring from BCIT, College of the Rockies, and Camosun College were more likely to participate in a co-op program while at university (Table 10).

Table 10: Participation in Co-op Program by College

BC College/Institute	# participated in co-op program	% participated in co-op program
B.C. Institute of Technology	7	41.2%
Camosun College	27	15.7%
Capilano College	8	4.1%
College of New Caledonia	4	6.3%
College of the Rockies	4	17.4%
Douglas College	4	2.2%
Kwantlen University College	10	4.5%
Langara College	7	6.5%
Malaspina University-College	9	11.1%
Northern Lights College	-	0.0%
Northwest Community College	-	0.0%
Okanagan University College	18	14.6%
Open University	-	0.0%
Other/Unknown	4	5.9%
Selkirk College	4	12.9%
University College of the Cariboo	5	7.4%
University College of the Fraser Valley	2	3.5%
Vancouver Community College	4	2.7%

C. Program Assessment

As part of the survey, graduates were asked to evaluate their overall satisfaction with their university education (see Table 11). The results indicate that the college transfers and direct entrants were equally satisfied (96% satisfied/very satisfied for both groups), although more college transfer participants were "very satisfied" (+6%).

Table 11:
Satisfaction with Education

	Direct Entrants		College Transfer		Total	
Very Dissatisfied	11	0.6%	7	0.4%	18	0.5%
Dissatisfied	62	3.4%	56	3.4%	118	3.4%
Satisfied	1,180	64.3%	945	58.1%	2,125	61.4%
Very Satisfied	581	31.7%	618	38.0%	1,199	34.7%

Not only do the vast majority of students feel well educated, they credit their university experience with enhancing their lives: 92% of direct entrants and 91% of college transfers state that their lives today, aside from their job, are different due to their total university experience.

Table 12:
Life-Changing Experience

Because of university, (other than job) my life is:	Direct Entrants		College Transfer		Total	
different today	1,662	91.5%	1,459	91.1%	3,121	91.3%
not different today	154	8.5%	142	8.9%	296	8.7%

Despite the strong endorsement, only 72% of the survey participants would select the same program again (Table 13).

Table 13:
Select Program Again

	Direct Entrants		College Transfer		Total	
Would select same program	1,269	71.4%	1,150	72.1%	2,419	71.7%
Would not select same program	509	28.6%	445	27.9%	954	28.3%

The primary reason respondents give for not selecting the same program again is a lack of career opportunities and difficulty finding a job (30% direct entrants; 33% college transfers), followed by changed interests (26% direct entrants; 21% college transfers). Less than 30% of those graduates who would not take the same program cited a primary reason related to course curricula, poor teaching, or a dislike of the institution itself (Table 14).

Table 14:
Reasons for Not Selecting Same Program Again

	Direct Entrants		College Transfer		Total	
Not enough course variety offered	7	1.4%	6	1.4%	13	1.4%
Skills acquired were not very useful	30	5.9%	37	8.4%	67	7.1%
Courses were poorly taught	3	0.6%	2	0.5%	5	0.5%
Program too general/not specialized enough	40	7.9%	33	7.4%	73	7.7%
Courses were not practical	63	12.5%	44	9.9%	107	11.3%
Interests have changed	129	25.5%	92	20.8%	221	23.3%
Few career opportunities/hard to find a job	150	29.7%	146	33.0%	296	31.2%
Did not like the institution	1	0.2%	1	0.2%	2	0.2%
Other	82	16.2%	82	18.5%	164	17.3%

At a very basic level, the fact that direct entrants and college transfer students appear equally challenged by limited career opportunities points to a post-secondary system that is producing

equally-qualified graduates. It is also worth noting that somewhat more direct entrants would not take the same program again because of changed interests (26%, compared to 21% college transfers). Because the direct entrant group is younger, and went straight from secondary school to university, they may not have had the same opportunity as some of the college transfer students to explore their academic and career interests before committing to a specific degree program (e.g., through work, travel, or taking a wide range of academic courses).

V. Further Education

Since graduating in 1996, the overwhelming majority of graduates have taken some form of further education.

Table 15:
Further Education

	Direct Entrants		College Transfer		Total	
Further Education or Training taken	1,674	91.0%	1,457	89.4%	3,131	90.3%
Further Education or Training not taken	165	9.0%	172	10.6%	337	9.7%

As shown in Table 16 below, more of the direct entrants are currently enrolled in further training or education; moreover, significantly more of the direct entrants were studying full-time (47%, compared to 33% college transfers). There are a number of possible reasons for these differences. More of the direct entry graduates have pursued graduate studies, and in particular they are almost three times more likely to pursue a doctoral degree. As the data shows, the college transfer group is generally older, and one might also hypothesize that they have more family commitments which prevent them from studying full-time. The findings parallel the tendencies found in previous studies for college transfers to be more likely to attend part-time.

Table 16:
Current Education or Training

	Direct Entrants		College Transfer		Total	
Currently enrolled	596	35.6%	446	30.6%	1,042	33.3%
Not currently enrolled	1,078	64.4%	1,011	69.4%	2,089	66.7%
Currently enrolled full-time	275	46.5%	148	33.3%	423	40.9%
Currently enrolled part-time	316	53.5%	296	66.7%	612	59.1%

Another possible explanation of differences relates to student debt. As discussed later (see Table 19), college transfers accrued more student loan debt than their direct entry counterparts, and more of them have debt left to repay five years after graduation. One might hypothesize that these graduates are less able and/or willing to give up employment in order to return to school full-time, and some may not as easily afford the costs of further education or training.

According to the survey results, direct entrants and college transfers have pursued further education and training for similar reasons (see Table 17). The majority have career-related objectives, the direct entrants to a somewhat lesser extent (60%, compared to 65% of college transfers). As well, slightly more direct entrants are pursuing Masters degrees (+2%) and Doctorates (+2.5%), likely related to different goals prior to entering university and higher graduation averages.

Table 17:
Reason for Further Education or Training

	Direct Entrants		College Transfer		Total	
Pursue another Bachelor degree	126	7.5%	105	7.2%	231	7.4%
Pursue Masters studies	187	11.2%	138	9.5%	325	10.4%
Pursue Doctoral studies	70	4.2%	24	1.7%	94	3.0%
Career/job/employment related	999	59.8%	937	64.5%	1,936	62.0%
Challenge myself/Personal interest	123	7.4%	113	7.8%	236	7.6%
To please parents/family	1	0.1%	1	0.1%	2	0.1%
Did not have a primary or main reason	2	0.1%	2	0.1%	4	0.1%
Required by employer	43	2.6%	38	2.6%	81	2.6%
Other	120	7.2%	95	6.5%	215	6.9%

The most commonly chosen location for further education is a university, more so for direct entrants than for college transfers. Put another way, more direct entrants sought additional degrees (23% vs. 18% for transfer students), and universities are the primary avenue for such attainment. It is interesting to note that both groups select universities as their major institution for further studies.

Table 18:
Location of Further Education or Training

	Direct Entrants		College Transfer		Total	
University	881	52.8%	697	47.9%	1,578	50.5%
College, university college or institute	315	18.9%	272	18.7%	587	18.8%
Private training school/firm	124	7.4%	119	8.2%	243	7.8%
Professional Association	135	8.1%	124	8.5%	259	8.3%
Correspondence School	34	2.0%	23	1.6%	57	1.8%
Private tutoring	8	0.5%	6	0.4%	14	0.4%
Employer	142	8.5%	174	12.0%	316	10.1%
Other	31	1.9%	39	2.7%	70	2.2%

Table 18a:
Location of Further Education or Training by Reason

	University	College	Priv.Train.	Prof.Ass.	Corresp.	Priv. Tutor	Employer	Other	Total
Direct Entrants									
Pursue another Bachelor	7.1%	0.3%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	7.5%
Pursue Masters studies	10.8%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	11.2%
Pursue Doctoral studies	4.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%
Career/employment related	23.0%	14.1%	5.8%	6.6%	1.6%	0.4%	6.8%	1.3%	59.8%
Challenge myself/Personal	3.2%	2.0%	0.4%	0.7%	0.2%	0.1%	0.4%	0.3%	7.4%
To please parents/family	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Did not have a main reason	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Required by employer	0.3%	0.3%	0.4%	0.5%	0.0%	0.0%	1.0%	0.1%	2.6%
Other	4.0%	1.6%	0.8%	0.2%	0.1%	0.0%	0.2%	0.2%	7.2%
Total	52.7%	18.7%	7.4%	8.1%	2.0%	0.5%	8.5%	1.9%	100.0%
College Transfers									
Pursue another Bachelor	7.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	7.2%
Pursue Masters studies	8.9%	0.1%	0.2%	0.0%	0.1%	0.0%	0.1%	0.1%	9.5%
Pursue Doctoral studies	1.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	1.7%
Career/employment related	24.9%	13.7%	6.2%	7.1%	1.4%	0.3%	8.9%	1.9%	64.5%
Challenge myself/Personal	2.6%	2.3%	0.8%	0.6%	0.0%	0.1%	1.0%	0.3%	7.8%
To please parents/family	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
Did not have a main reason	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Required by employer	0.3%	0.3%	0.2%	0.3%	0.0%	0.0%	1.4%	0.0%	2.6%
Other	2.6%	1.9%	0.6%	0.4%	0.0%	0.0%	0.6%	0.3%	6.5%
Total	47.9%	18.7%	8.1%	8.5%	1.5%	0.4%	12.0%	2.7%	100.0%

VI. Education Financing and Debt

Clear differences between the two groups emerge in the area of education financing and student debt. According to the data, college transfers differ markedly from direct entrants to university in their reliance on student loans as their primary source of funding.

Employment is the funding source most commonly used by both groups (33% college transfers; 36% direct entrants). However, as shown in Table 19, 32% of the graduates who transferred from college relied on student loans, compared to 16% of the direct entrants. Interestingly, transfer students rely less on family and friends (22%, compared to 28% direct entrants), perhaps a reflection of the fact that the students who moved directly from secondary school to university are generally younger than their counterparts who transferred from college, and may be more connected to their family monetarily. Also of interest is the fact that direct entrants are also four times as likely to receive scholarships, bursaries, and grants (8%, compared to 2% of college transfer students). Further studies are required to determine whether college transfer students, across their entire post-secondary education, have equal access to scholarships and bursaries.

Table 19:
Primary Source of Funding

	Direct Entrants		College Transfer		Total	
Personal Savings	174	9.5%	145	8.9%	319	9.2%
Employment	666	36.3%	532	32.7%	1,198	34.6%
Family/Friends	520	28.4%	354	21.7%	874	25.2%
Bank Loans	7	0.4%	12	0.7%	19	0.5%
Student Loans	294	16.0%	519	31.9%	813	23.5%
Scholarships/Bursaries/Grants	145	7.9%	29	1.8%	174	5.0%
Other (Specify)	11	0.6%	16	1.0%	27	0.8%
First Nations Funding	3	0.2%	18	1.1%	21	0.6%
Co-op Program	14	0.8%	3	0.2%	17	0.5%

For many students, debt is the only negative outcome of their post-secondary education, though one which is hopefully alleviated through meaningful employment. According to the survey data, debt is more severe for college transfer students despite significantly lower tuition fees.

As outlined in Table 20, the average debt load of the college transfer participants (excluding those with no debt) was about $5,500 more than that of direct entrants.

Table 20:
Average Debt Load

Direct Entrants	College Transfer	All Respondents
$ 14,931	$ 20,465	$ 18,127

Note: Average debt load only includes those who incurred debt.

Table 21 shows that college transfer students are also far more likely to incur debt (55% compared to 35% for direct entrants) and confirms that debt loads when incurred are higher: 27% of the college transfer group accrued $20,000 or more in debt, compared to 11% of direct entrants. Selecting for debtors only, 50% of transfer students versus 31% of direct entrants incurred at least $20,000 in debt.

Table 21:
Financial Debt Incurred
At Graduation

	Direct Entrants		College Transfer		Total	
0	1,154	64.5%	711	45.1%	1,865	55.4%
1-4,999	96	5.4%	68	4.3%	164	4.9%
5,000-9,999	141	7.9%	118	7.5%	259	7.7%
10,000-14,999	126	7.0%	142	9.0%	268	8.0%
15,000-19,999	75	4.2%	108	6.8%	183	5.4%
20,000-24,999	76	4.3%	124	7.9%	200	5.9%
25,000-29,999	41	2.3%	86	5.4%	127	3.8%
30,000-34,999	35	2.0%	89	5.6%	124	3.7%
35,000-39,999	13	0.7%	41	2.6%	54	1.6%
40,000 or more	31	1.7%	91	5.8%	122	3.6%

Note: table includes all debt, whether from student loan or other source.

Now we turn from total debt from all sources, to only that debt incurred from student loans. An examination of the amount that loan recipients had left to repay five years later shows a difference between college transfer and direct entry students: 66% of those college transfer students who incurred student loan debt to pay for their degrees still had money owing in 2001, compared to 59% of direct entry graduates. The average amount they had left to repay was also higher: $8,783 for college transfers compared to $6,297 for direct entrant, which was also proportionally higher (48% of original debt vs. 45%).

Table 22:
Remaining Student Loan Debt
5 Years Out

Remaining debt	Direct Entrants		College Transfer		Total	
0	204	41.3%	232	33.7%	436	36.9%
1-4,999	79	16.0%	78	11.3%	157	13.3%
5,000-9,999	79	16.0%	104	15.1%	183	15.5%
10,000-14,999	51	10.3%	104	15.1%	155	13.1%
15,000-19,999	31	6.3%	62	9.0%	93	7.9%
20,000-24,999	31	6.3%	47	6.8%	78	6.6%
25,000-29,999	6	1.2%	34	4.9%	40	3.4%
30,000 or more	13	2.6%	28	4.1%	41	3.5%
Mean loan debt incurred	$14,023		$18,379		$16,556	
Mean remaining debt	$6,297		$8,783		$7,745	
% remaining	44.9%		47.8%		46.8%	

Note: table includes only debt remaining from actual student loans, and omits students who had not incurred any debt.

VII. Labour Market Outcomes

A. Unemployment

A central component in assessing the success of a university education is the ability of graduates to find employment. Overall, the unemployment rate for BC's 1996 university graduates in 2001 was 3.7%, less than half the national average of 7.6% (Statistics Canada). A comparison of the direct entrants and college transfers reveals a 0.9% difference in unemployment rates (4.1% direct entrants unemployed and looking for a job, compared to 3.2% of college transfers).

Table 23:
Employment/Unemployment

		Direct Entrants		College Transfer		Total	
Working	A	1,587	86.7%	1,435	88.7%	3,022	87.7%
Not working but looking	B	67	3.7%	48	3.0%	115	3.3%
Not working not looking		176	9.6%	134	8.3%	310	9.0%
Unemployment rate	B/(A+B)		4.1%		3.2%		3.7%

Among the relatively few unemployed (but actively looking) respondents, we see the most common reasons given for their unemployment are lack of work, lost jobs, and full-time schooling. Unemployed college transfers graduates are more likely than direct entrants to claim lack of opportunity (24%, compared to 18% of direct entrants), but much less likely to cite "lost or quit job" (13%, compared to 27% of direct entrants).

Table 24:
Reasons for Unemployment

	Direct Entrants		College Transfer		Total	
Temporary or Seasonal layoff	5	7.5%	4	8.7%	9	8.0%
Casual part-time worker	1	1.5%	0	0.0%	1	0.9%
Lost or quit job	18	26.9%	6	13.0%	24	21.2%
Can't find work/lack of opportunities	12	17.9%	11	23.9%	23	20.4%
Going to school full-time	10	14.9%	9	19.6%	19	16.8%
Caring for children full-time	0	0.0%	3	6.5%	3	2.7%
Going to school part-time	2	3.0%	3	6.5%	5	4.4%
Other personal or family responsibilities	2	3.0%	0	0.0%	2	1.8%
Personal preference	1	1.5%	1	2.2%	2	1.8%
On a leave / maternity leave	1	1.5%	0	0.0%	1	0.9%
Lack the skills for the job that I want	1	1.5%	1	2.2%	2	1.8%
Just finished school	8	11.9%	0	0.0%	8	7.1%
Recently returned (after travel, work abroad)	1	1.5%	3	6.5%	4	3.5%
Other	5	7.5%	5	10.9%	10	8.8%

When we examine the various reasons for not looking for work (Table 25), the most common reason cited was enrollment in full-time schooling, with a substantial difference between direct entrants (54%) and college transfers (32%). Albeit to a much smaller degree, more not employed college transfers are caring for children (+9%) or on leaves of absence/maternity leaves (+8%) than the direct entrant graduates, likely because of their greater age (there are approximately the same proportion of women in both groups; see Table 2).

Table 25:
Reasons for Choosing Not to Work

	Direct Entrants		College Transfer		Total	
Temporary or Seasonal layoff	3	1.7%	1	0.7%	4	1.3%
Lost or quit job	2	1.1%	3	2.2%	5	1.6%
Can't find work / lack of opportunities	3	1.7%	2	1.5%	5	1.6%
Going to school full-time	95	54.0%	43	32.1%	138	44.5%
Caring for children full-time	18	10.2%	26	19.4%	44	14.2%
Going to school part-time	2	1.1%	2	1.5%	4	1.3%
Other personal or family responsibilities	9	5.1%	11	8.2%	20	6.5%
Personal preference	2	1.1%	4	3.0%	6	1.9%
Retired	5	2.8%	5	3.7%	10	3.2%
On a leave / maternity leave	16	9.1%	23	17.2%	39	12.6%
Lack the skills for the job that I want	0	0.0%	3	2.2%	3	1.0%
Just finished school	1	0.6%	2	1.5%	3	1.0%
Recently returned (after travel, work abroad)	4	2.3%	1	0.7%	5	1.6%
Awaiting work visa	2	1.1%	0	0.0%	2	0.6%
Currently a full-time volunteer worker	0	0.0%	2	1.5%	2	0.6%
Other (Specify)	14	8.0%	6	4.5%	20	6.5%

B. Employment Characteristics

Of the employed respondents, more college transfers hold more than one job (17%, compared to 12% direct entrants), while only slightly more direct entrants are self-employed (8%, compared to 7% college transfers).

Table 26:
Employment Characteristics

	Direct Entrants		College Transfer		Total	
Paid worker	1,390	87.6%	1,264	88.1%	2,654	87.8%
Self-employed	132	8.3%	99	6.9%	231	7.6%
Both a paid worker and self-employed	65	4.1%	72	5.0%	137	4.5%
One job	1,394	87.9%	1,198	83.5%	2,592	85.8%
More than one job	192	12.1%	237	16.5%	429	14.2%

Sixty-five percent of the employed direct entrants and 62% of employed transfer students indicate that their employer requires a bachelors degree to perform the responsibilities of their job.

Table 27:
Relevance of Degree to Job

	Direct Entrants		College Transfer		Total	
Bachelors' required	999	65.4%	846	61.8%	1,845	63.7%
Bachelors' not required	528	34.6%	524	38.2%	1,052	36.3%
How related is your job to the program you graduated from:						
Not at all Related	259	16.3%	233	16.3%	492	16.3%
Not very Related	246	15.5%	193	13.5%	439	14.5%
Somewhat Related	549	34.6%	444	31.0%	993	32.9%
Very Related	532	33.5%	563	39.3%	1,095	36.3%

When asked to evaluate the relatedness of their main job with their university program, slightly more college transfers indicated that they were "somewhat related" or "very related" (70%, compared to 68% for direct entrants), with +6% college transfers stating that they are "very related."

C. Occupational Types and Skill Levels

As part of the survey analysis, the occupational skill levels of graduates as defined by the types of jobs they had were compared between 1997 and 2001 (Table 28).

Table 28:
Skill Level of Job

1997 Job	Direct Entrants		College Transfer		Total	
Management	57	5.1%	49	4.7%	106	4.9%
Skill Level A (Professional Occupations)	620	55.7%	585	55.9%	1,205	55.8%
Skill Level B (Tech, Paraprofessional and Skilled Occ.)	194	17.4%	192	18.4%	386	17.9%
Skill Level C (Intermediate Occupations)	220	19.8%	187	17.9%	407	18.9%
Skill Level D (Labouring and Elemental Occupations)	22	2.0%	33	3.2%	55	2.5%
2001 Job						
Management	79	5.0%	76	5.3%	155	5.2%
Skill Level A (Professional Occupations)	1,087	69.0%	904	63.3%	1,991	66.3%
Skill Level B (Tech, Paraprofessional and Skilled Occ.)	286	18.2%	289	20.3%	575	19.2%
Skill Level C (Intermediate Occupations)	116	7.4%	144	10.1%	260	8.7%
Skill Level D (Labouring and Elemental Occupations)	7	0.4%	14	1.0%	21	0.7%

One year after completing their bachelors degrees, 56% of both direct entrants and college transfers held jobs at the professional skill level. By 2001, 69% of direct entrants hold professional jobs (a 13%increase) compared to 63% of the college transfer group (a 7% increase). A possible reason for this differential in the shift could be due to more direct entry students pursuing higher education at the university level (graduate and professional degrees).

Table 29 more specifically outlines the types of occupations of the 1996 cohort. By a substantial margin, the greatest percentage have social sciences, education, or government services occupations (48% of college transfers, 36% of direct entrants). Likely connected to the fact that more direct entrants completed degrees in the sciences, this group's second most popular occupational area is in the natural and applied sciences (18%, compared to 11% of college transfers). For the college transfers, occupations in business, finance and administration are the second most common (16%, also common among direct entrants with 18%).

Table 29:
Skill Type of Job

	Direct Entrants		College Transfer		Total	
Management	2	0.1%	5	0.4%	7	0.2%
Business, Finance and Administrative	288	18.3%	234	16.4%	522	17.4%
Natural and Applied Sciences	288	18.3%	158	11.1%	446	14.9%
Health	167	10.6%	85	6.0%	252	8.4%
Social Science, Education, Government Services	568	36.1%	683	47.9%	1251	41.7%
Art, Culture, Recreation and Sport	99	6.3%	70	4.9%	169	5.6%
Sales and Service	123	7.8%	142	10.0%	265	8.8%
Trades, Transport and Equip. Operators	19	1.2%	27	1.9%	46	1.5%
Unique to Primary Industry	11	0.7%	9	0.6%	20	0.7%
Unique to Processing, Manufacturing and Util.	10	0.6%	14	1.0%	24	0.8%

Survey participants were also asked to evaluate the extent to which they use specific skills in their jobs, ranging from verbal and written skills to thought formulation and ability to work collaboratively (see Table 30). Despite the differing skill types in jobs held, there is remarkable agreement between transfers and direct entrants on the extent to which they use these skills.

The most commonly used skills are verbal expression (97% to some or a great extent), the ability to resolve issues or problems (96%), and the ability to work with others (95%). The least commonly employed skill is the ability to use mathematical models to analyze data (45%).

Table 30:
Skills used at Current Job

ability to verbally express opinions or ideas clearly and concisely	Direct Entrants		College Transfer		Total	
To no extent at all	10	0.6%	10	0.7%	20	0.7%
To a small extent	35	2.2%	43	3.0%	78	2.6%
To some extent	285	18.0%	225	15.7%	510	16.9%
To a great extent	1.256	79.2%	1.156	80.6%	2.412	79.9%

ability to write clearly and concisely	Direct Entrants		College Transfer		Total	
To no extent at all	41	2.6%	54	3.8%	95	3.1%
To a small extent	107	6.7%	84	5.9%	191	6.3%
To some extent	380	24.0%	331	23.1%	711	23.6%
To a great extent	1.058	66.7%	964	67.3%	2.022	67.0%

ability to formulate original thoughts or ideas	Direct Entrants		College Transfer		Total	
To no extent at all	37	2.3%	47	3.3%	84	2.8%
To a small extent	136	8.6%	114	8.0%	250	8.3%
To some extent	595	37.5%	502	35.0%	1.097	36.3%
To a great extent	818	51.6%	770	53.7%	1.588	52.6%

ability to resolve issues or problems	Direct Entrants		College Transfer		Total	
To no extent at all	13	0.8%	18	1.3%	31	1.0%
To a small extent	48	3.0%	38	2.7%	86	2.8%
To some extent	317	20.0%	268	18.7%	585	19.4%
To a great extent	1.209	76.2%	1.109	77.4%	2.318	76.8%

ability to compose logical arguments	Direct Entrants		College Transfer		Total	
To no extent at all	43	2.7%	52	3.6%	95	3.1%
To a small extent	188	11.8%	157	11.0%	345	11.4%
To some extent	542	34.2%	484	33.8%	1.026	34.0%
To a great extent	814	51.3%	738	51.6%	1.552	51.4%

ability to use mathematical models and methods to analyze data	Direct Entrants		College Transfer		Total	
To no extent at all	383	24.2%	393	27.5%	776	25.8%
To a small extent	484	30.5%	399	28.0%	883	29.3%
To some extent	414	26.1%	368	25.8%	782	26.0%
To a great extent	304	19.2%	267	18.7%	571	19.0%

ability to work collaboratively with others	Direct Entrants		College Transfer		Total	
To no extent at all	7	0.4%	18	1.3%	25	0.8%
To a small extent	67	4.2%	58	4.0%	125	4.1%
To some extent	294	18.5%	256	17.9%	550	18.2%
To a great extent	1.218	76.8%	1.102	76.8%	2.320	76.8%

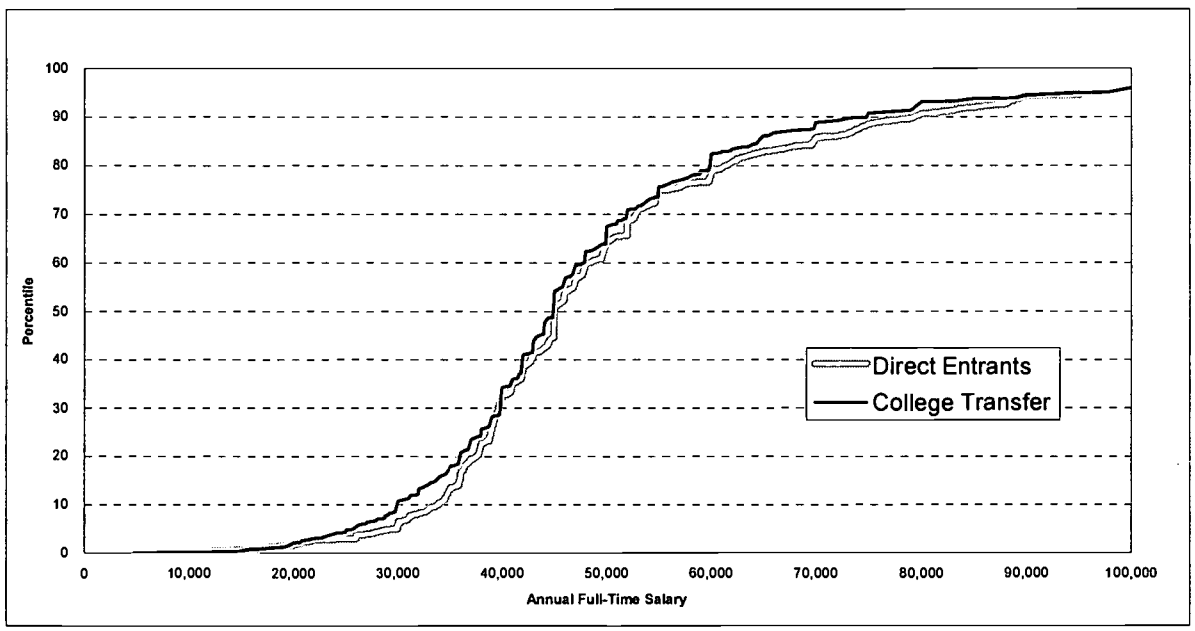
D. Comparing Employment Income

So far we have examined the differences between high school and transfer entry graduates on various indicators with relatively simple analyses, and without addressing questions of statistical significance. In this section we compare employment income in a more sophisticated analysis. Employment income is always of great interest to students, graduates, and policy makers and as such, warrants more thorough investigation. Also, the more complex analysis is helpful in a more general understanding of differences between the two groups, and in suggesting directions for further research.

Figure 2 shows the cumulative distribution of full-time salaries for each of these groups, excluding the top 5% of salaries. Employment income from survey data often results in a small number of extremely high salaries, hence comparisons of group means may not be meaningful. The top 5% of salaries corresponds to annual salaries over $100,000 but includes verified salaries in excess of $2 million, which are not likely to be the direct result of post-secondary education alone. Therefore to avoid the distorting effects on the results of these very high salaries, we limit the analysis, and hence the conclusions, to those earning less than $100,000.

The distribution of incomes (as opposed to comparing means or medians) is important, since for example, if large numbers of low incomes are offset by a small number of high incomes, the mean for a particular group may not be the best representation of the sample data. For these reasons, we begin by looking at the cumulative salary distributions of the two groups: direct entrants and college transfers.

Figure 2: Cumulative Income Distributions (excludes top 5%)



Visual inspection of the two cumulative curves is illuminating for two reasons. First, the shapes of the curves corroborate the validity of the data. While employment income data is notorious for anomalies, these two curves are smooth (sufficient data), show the characteristic shape of a salary distribution ("S" with a high end tail), and the curves for the two samples have the same shape, indicating the absence of extreme anomalies within either set. Second, while the two curves are clearly visually different, the difference is not great. The secondary school entry curve is slightly ahead of the transfer curve across all income levels, representing a statistically significant difference of about $1,600 (see Table 31).

Table 31: Test of Statistical Significance for Differences in Full-time Earnings

	Levene's Test for Equality of Variances		t-test for Equality of Means						
Independent Samples Test: Total Income from Main Job	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	5.7	0.017	2.4	2218.0	0.016	1608.8	669.3	296.3	2921.3
Equal variances not assumed			2.4	2214.3	0.016	1608.8	666.8	301.3	2916.4

We know from the foregoing analysis of respondents, as well as many other studies, that direct entry students, and college transfer students differ from one another on many variables. Direct entrants have higher high school averages, transfer students tend to be older, and are more likely to be women, and the mix of disciplines within the two groups is very different. Certainly the differences in average salary between the two groups cannot be attributed solely to the direct entry/transfer distinction.

In order to investigate what the impact of other variables might be on the salary difference, we analyse the data using analysis of covariance (Table 32).

In the analysis of covariance, we examine the effect of direct entry versus college transfer on average salaries, while simultaneously taking into account the fact that there are significant differences between the two groups on other variables which are also related to employment income. The idea is to use the statistical technique to separate the effects of each of these variables.

Table 32: Analysis of Covariance for Total Full-time Earnings

Tests of Between-Subjects Effects: Total Income from Main Job

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta squared
Corrected Model	99743785495	26	3836299442	19.1	0.000	0.189
Intercept	90102663406	1	90102663406	448.5	0.000	0.173
Secondary vs College	1161455898	1	1161455898	5.8	0.016	0.003
Co-op program	2940671281	1	2940671281	14.6	0.000	0.007
Age	2457471590	1	2457471590	12.2	0.000	0.006
Discipline group	33198560861	12	2766546738	13.8	0.000	0.072
Gender	12914351505	1	12914351505	64.3	0.000	0.029
Region	19907303155	9	2211922573	11.0	0.000	0.044
Further Education	1605767746	1	1605767746	8.0	0.005	0.004
Error	429318636406	2137	200897817.7			
Total	5389816844238	2164				
Corrected Total	529062421901	2163				

a. R Squared = .189 (Adjusted R Squared = .179)

Table 32 shows seven other variables with a statistically significant effect on employment income. While each is interesting in its own right, here we are only interested in the extent to which other variables moderate the effect of direct entry versus college transfer on the salary difference. The analysis is missing one key variable – the high school grades of the graduates; since we know from other research that there are very significant differences in high school grades between the two groups, we must still keep in mind that this difference may well statistically account for some portion of the salary differential.

The key statistical result from this table is in the last column, "Eta Squared", a measure of the effect size. The effect size is a number between 0 and 1 which gives a normalized measure of the size of the statistical effect of a particular variable, relative to the other variables in the equation. The largest effect size, by far, is the disciplinary effect; the smallest is the effect due to "Transfer/Direct Entry". We can interpret the large effect size of discipline on salaries as a straight forward illustration of the fact that some disciplines result in higher earnings than others. However we cannot go further and say that the difference between the two groups is explained by differences in disciplinary choices.

From this series of somewhat in-depth statistical analyses we conclude the following:

1. there is a difference in full-time salary earnings between direct entry and transfer;
2. the difference is very small, both intuitively (from the graph), and statistically, compared to other effects.

There is much research that shows the connection between academic achievement in secondary school and a student's post-secondary success. While the research on the relationship between secondary school grades and earnings is much less clear, we must not rule out the possibility that another reason for the difference in full-time salary earnings may well be related to underlying differences in high school achievement. One channel through which grades do affect earnings is via entry to professional schools and indeed we do know that direct entry students are more likely to have continued on to law and medicine.

VIII. Social Engagement

A university education affects the whole individual—it not only provides graduates with job skills and related knowledge, but also contributes to personal growth and an individual's sense of his or her place in society. One's productive relationship to society—that which fosters coordination and cooperation for mutual benefit—has been labeled "social engagement" by researchers.

Examples of social engagement include volunteerism, charitable donations, and civic participation. Education has been identified as the best predictor of civic participation (Ehrlich, 2000). Furthermore, the level of social engagement can be viewed as an important outcomes measure for the post-secondary system. The fact that BC's colleges and universities support this concept is evidenced in the innovative programs they continue to develop to help engage their students in the world around them (e.g., UBC's Downtown Eastside programs).

Table 33:
Social Engagement: Volunteering

	Direct Entrants		College Transfer		Total	
Volunteered in past 12 months	1,004	55.1%	959	59.4%	1,963	57.1%
Did not volunteer in the past 12 months	817	44.9%	656	40.6%	1,473	42.9%

A comparison of direct entry and college transfer graduates suggests that the two groups are relatively similar in their degree of social engagement. Somewhat more college transfers indicated that they had volunteered in the past year (59%, compared to 55% of direct entrants), a difference which is spread relatively evenly throughout a wide range of volunteer activities such as fundraising, serving as a board or committee member, or teaching / coaching for an organization (see Table 34).

Table 34:
Type of Volunteering

over the past 12 months, did you:	Direct Entrants		College Transfer		Total	
Organize or supervise activities or events	716	71.3%	710	74.0%	1,426	72.6%
Teach or coach	455	45.3%	488	50.9%	943	48.0%
Serve (unpaid) on board or committee	418	41.6%	445	46.4%	863	44.0%
Provide info. or help educate or lobby	413	41.1%	450	46.9%	863	44.0%
Canvass, campaign, or fundraise	418	41.6%	413	43.1%	831	42.3%
Consult, or do exec/office/admin work	308	30.7%	314	32.7%	622	31.7%
Collect, serve, or deliver food/goods	214	21.3%	225	23.5%	439	22.4%
Engage in activities for protecting environment	208	20.7%	220	22.9%	428	21.8%

Table 35:
Education as Motivator of Social Engagement

To what extent did your university education motivate you to undertake volunteer work:	Direct Entrants		College Transfer		Total	
To no extent at all	379	37.9%	315	33.2%	694	35.6%
To a small extent	239	23.9%	220	23.2%	459	23.5%
To some extent	285	28.5%	295	31.1%	580	29.7%
To a great extent	97	9.7%	120	12.6%	217	11.1%

Transfer students are also more likely to credit their education with motivating them to volunteer, with 44% indicating that this was the case "to some extent" or "to a great extent" (compared to 38% of direct entrants).

As shown in Table 36, approximately 76% of the survey respondents made charitable donations in the previous year, with no great difference between the rates for college transfers and direct entrants. Direct entrants donate slightly more on average than do the transfer students. The fact that so many graduates from both groups are making charitable donations reflects positively on their level of social commitment. This is particularly true of the college transfers, who despite significantly greater debt load are still making equally generous donations as their direct entry peers.

Table 36:
Charitable Donations

	Direct Entrants		College Transfer		Total	
Donated within last 12 months	1,396	76.6%	1,236	76.2%	2,632	76.4%
Did not donate within last 12 months	427	23.4%	385	23.8%	812	23.6%
Donated $1-99	265	20.0%	266	22.8%	531	21.3%
Donated $100-$249	525	39.7%	463	39.7%	988	39.7%
Donated $250-499	165	12.5%	179	15.4%	344	13.8%
Donated $500-999	176	13.3%	116	9.9%	292	11.7%
Donated $1,000-1,999	75	5.7%	54	4.6%	129	5.2%
Donated $2,000-4,999	79	6.0%	66	5.7%	145	5.8%
Donated $5,000-9,999	32	2.4%	19	1.6%	51	2.0%
Donated $10,000 or more	6	0.5%	3	0.3%	9	0.4%
Average donation	$602		$526		$566	

IX. Conclusions

The results of this study confirm the positive impact of a baccalaureate education for graduates of BC's public universities, regardless of whether they are direct entrants from secondary school or college transfer students, and further confirm the success of the transfer system. Five years after completing their degrees, college transfers were found to have remarkably similar outcomes to those of direct entrants. 96% of both groups indicate that they are satisfied with their university education, and 91% feel that their lives, apart from their jobs, are different today due to their university experience. Furthermore, both direct entrants and college transfers enjoy low rates of unemployment, approximately half the national average, with the majority working in professional occupations. Both groups also exhibit high levels of social engagement, particularly with their charitable donations, reflecting the personal development which is also an important outcome of the university experience.

While the direct entrant and college transfer survey participants are very similar on most outcome measures, the data does reveal some interesting differences which suggest that completing a bachelors degree may present certain unique challenges for college transfer students. The greatest disparity is found in the area of student financing and debt, where the survey data clearly shows that college transfer students accumulate more debt than direct entrants in completing their baccalaureate education. Not only are college transfers more likely to incur debt, but the amount of that debt is also, on average, approximately $5,500 higher. The college transfers also depend on student loans to a far greater extent (32%, compared to 16% of direct entrants), and more had loans remaining five years after graduation, with a higher amount left to repay. The fact that the college transfer graduates are slightly older (+2.8 years); don't rely to the same extent as direct entrants on their family for financial support; and receive fewer scholarships, bursaries and grants as primary sources of funding may provide some explanation for their higher debt load.

Along with differences in their financing and debt load, the college transfer and direct entry graduates also vary in their pursuit of further education. Although almost all of the survey participants have taken some form of further education, significantly more of the direct entrants enrolled at the time of the survey were studying full-time (47%, compared to 33% of college transfers). And while the survey results don't fully explain this difference, the fact that the college transfer group is slightly older may be connected with increased family responsibilities which prevent them from studying full-time. To some extent, this hypothesis is supported by the data showing that more college transfers have chosen not to work because they are caring for children (+9%) or on a leave/maternity leave (+8%). Moreover, the fact that a higher percentage of college transfers have debt remaining from their bachelors degree may prevent them from giving up employment to complete further education on a full-time basis.

Employment is considered by many to be the most important outcome of higher education. Both the direct entrant and college transfer survey participants enjoy relatively low rates of unemployment, particularly the college transfers (3.2%, compared to 4.1% of direct entrants). One possible reason for the difference suggested by the data is that direct entrants are more likely to pursue further education hence at the time of the survey would still be in a transition period. While direct entrants have statistically significant higher salaries than their college transfer

counterparts, the disparity is small and may be statistically related more to higher academic achievement in secondary school than their entry route to university. Prior studies have established that on average college transfers have lower high school GPA's than direct entrants as a function of the selection process.

Although the survey data reveals some interesting outcome differences between direct university entrants and college transfers, most of which require additional investigation to fully explain, it is clear that both groups are experiencing the economic and social benefits of their baccalaureate education. The diversity of BC's post-secondary system, as exemplified in the college transfer process, has allowed many individuals to obtain university degrees who otherwise may not have had the opportunity. Examples include persons from remote communities, mature students, those who had not met the university admission requirements as 18-year old high school graduates, Aboriginal persons and those with disabilities. The merits of this system are well documented, and ongoing evaluation through surveys such as this will help ensure that both direct entrants to university and college transfer students continue to receive a high quality education.

X. Recommendations

(1) Each of the outcomes measures described in this report can be analyzed in much more detail. The evidence suggests that many of the differences between direct entrant and college transfer graduates can be attributed to demographic factors (eg., age, region of origin, Aboriginal status, gender). A subsequent study that examines outcomes measures for college transfer graduates based on these factors would serve to illuminate differences within the college sector, providing a broad new perspective on post-secondary education and access.

(2) The largest percentage of graduates from both entry routes have completed degrees in the Social Sciences, college transfers to a greater extent (37%, compared to 28% of direct entrants). More notable, perhaps, is the fact that direct entrants were three times more likely than college transfers to complete Science degrees (Computing Science, Life Sciences, and Physical Sciences). The data do not provide an explanation for this trend, and further research should be undertaken to determine why fewer college transfer students are completing Science degrees. It is also important to examine whether there are ways to support Science students who begin in the college system, especially as it continues to become increasingly more competitive to gain admission to university Science programs directly from secondary school.

(3) A smaller percentage of college transfers participated in co-operative education, a program with documented benefits in helping graduates obtain employment. While the overall percentage of co-op participants may be low (9.4%) and the differential relatively small (11% direct entrants, 7% college transfers), it is still worth examining whether fewer college transfer students have the opportunity to participate in co-op because of the year level at which they transfer to university, or if the difference is primarily due to which program was taken. Further review should also consider whether there are ways in which the universities and colleges can work together to provide bridged co-op

programs which may encourage more college transfer students to consider co-op as a means to enhance their academic experience and work life beyond university.

(4) As previously discussed, a smaller percentage of the college transfer graduates had used scholarships, bursaries and grants as a primary source of funding. In view of the fact that their baccalaureate education often takes longer to complete and is clearly resulting in a higher debt load than for direct entrants, it's important to determine whether these transfer students have equal access to scholarships and bursaries across their entire post-secondary education.

(5) Despite their shared labour market success, fewer college transfer graduates than direct entrants have moved into professional occupations (-6%) or are in positions that require a bachelors degree (-3%). As well, a higher percentage of college transfers (+5%) are working at more than one job. The data do not provide clear explanations for these differences, and future outcomes research should seek to determine more clearly whether there is a connection between university entry route and the types of occupations graduates are obtaining.

(6) There is much research that shows the connection between academic achievement in secondary school and a student's post-secondary success; however, due to limitations in the data obtained, this analysis could not consider the participants' secondary school graduating averages. Data was also not available on the college transfer graduates' year of entry and total credits transferred, and on the university graduating averages for all survey participants. Future outcomes studies will benefit from the inclusion of this information. Data has been collected on student admission averages upon entering university, and further research should be conducted on whether outcomes for college transfers vary when controlled for admission averages to the university.

(7) Other studies have established that transfer students are able to smoothly transfer to universities with up to two years of transfer credit, that they succeed in their subsequent university course work, and that they graduate at comparable degree completion rates. Using system data or objective survey questions, this study establishes that long-term outcomes are remarkably similar for college transfers and direct entrants. However, little research has been conducted on the actual experiences and perceptions of college transfers on their complete post-secondary experience, both academically and generally. For example, college transfers may be succeeding despite having to overcome obstacles within the system and in their university courses, or they may feel that their college preparation has given them a significant advantage. A future survey of college transfer graduates should ask participants to assess the quality of their college education and how well it prepared them for their senior academic work at university. The survey should also solicit information on the extent to which the graduates' college experience contributed to their overall perception of their post-secondary education.

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