

**Student Transitions Project**

**Working Paper -  
What is the flow of Grade 12 graduates into and  
among BC public post-secondary institutions over a  
multi-year period.**

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Prepared by  
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on behalf of the  
Minister of Education  
and the  
Minister of Advanced Education  
of the Province of Government of British Columbia

## **Student Transitions Project Highlights Research Question 3 October 2007**

### **About STP**

The Student Transitions Project is a collaborative effort of British Columbia's Ministries of Education and Advanced Education and B.C.'s public post-secondary institutions. The STP is helping school districts, post-secondary institutions and the government to plan and manage programs and access to higher education in B.C.

The topic of this newsletter is STP Research Question #3:

*What is the flow of Gr 12 graduates into and among B.C. public post-secondary institutions over a multi-year period, with K-12 data from 2001/02 – 2004/05, and post-secondary data from 2002/03 – 2005/06?*

- a) Which Gr 12 students attended post-secondary institutions, left for a period, then returned (stop outs)*
- b) Which Gr 12 students remained at the same post-secondary institution through the entire reporting period?*
- c) What are the patterns of student mobility among post-secondary institutions? What is the number of institutions ever attended?*
- d) Which Gr 12 students graduated with a credential from a post-secondary institution during the reporting period?*
- e) Which Gr 12 students left the post-secondary institution and did not show up at another public post-secondary institution during the reporting period?*

### **Methodology**

All students entering the B.C. K-12 system are assigned a Personal Education Number (PEN). This unique identifier follows students throughout their public education in British Columbia. STP links encrypted PENs common to the K-12 and Advanced Education systems to track student transitions while maintaining personal privacy.

### **Previous Reports**

The June 2006 STP Newsletter, published in response to Research Question #2, is directly relevant to this report. Question #2 was:

*What is the nature and distribution of the transition of students from the K-12 education system into B.C. public post-secondary institutions over a multi-year period (K-12 data 2001/02 – 2003/04; post-secondary data 2002/03 – 2004/05)?*

Some of the same data are presented again, but with an additional year of tracking – showing 2005/06 post-secondary enrollment data.

### **Supporting Pivot Tables**

The pivot tables on which this research is based are available to institutions, permitting more specific and detailed analysis to those seeking answers that may be relevant to a specific region, institution or other identifiable group. Because of confidentiality concerns, data masking has been employed where populations are not large enough to ensure the confidentiality of individual records.

### **Definitions**

**Secondary school or high school graduate:** a B.C secondary school student who completes his or her regular or adult 'Dogwood' certificate in the school graduation year (1 October to 30 September.)

**Post-secondary registrant (enrollee):** a student who registers in at least one course in a B.C. public post-secondary institution within the academic year 1 September to 31 August and remains registered on the stable enrollment date of that institution.

**Immediate Entry (I):** a student who enrolls in a B.C. public post-secondary institution within one year of secondary school graduation.

**Delayed entry (D1,):** a student who first enrolls in a B.C. public post-secondary institution more than one year but less than two years after secondary school graduation. D2, D3 etc each denote entry one further year after secondary school graduation.

**Academic gpa:** the average achieved in four Grade 12 academic subjects, including English. Provincial examination marks are blended with school-based marks in accordance with Ministry of Education policy. No average is calculated if the student does not have successfully completed English and 3 further courses widely used by the B.C. universities to determine admission. A student with an academic gpa of 75% or higher is considered admissible for direct entry to a university, although the actual threshold values may vary by institution, program and year.

**CDW Institution:** one of 20 post-secondary institutions (university colleges, urban colleges, small colleges, institutes and Thompson Rivers University) that reports its enrollment data to the Central Data Warehouse.

### **STP Web Site**

Further information about STP, reports and summaries are available at

[http://www.aved.gov.bc.ca/student\\_transitions/welcome.htm](http://www.aved.gov.bc.ca/student_transitions/welcome.htm)

### **Acknowledgment**

Joanne Heslop, Acting Director of Institutional Research and Planning, Simon Fraser University, kindly provided invaluable expert assistance in the preparation of the data for analysis.

### Codes used to represent institutions

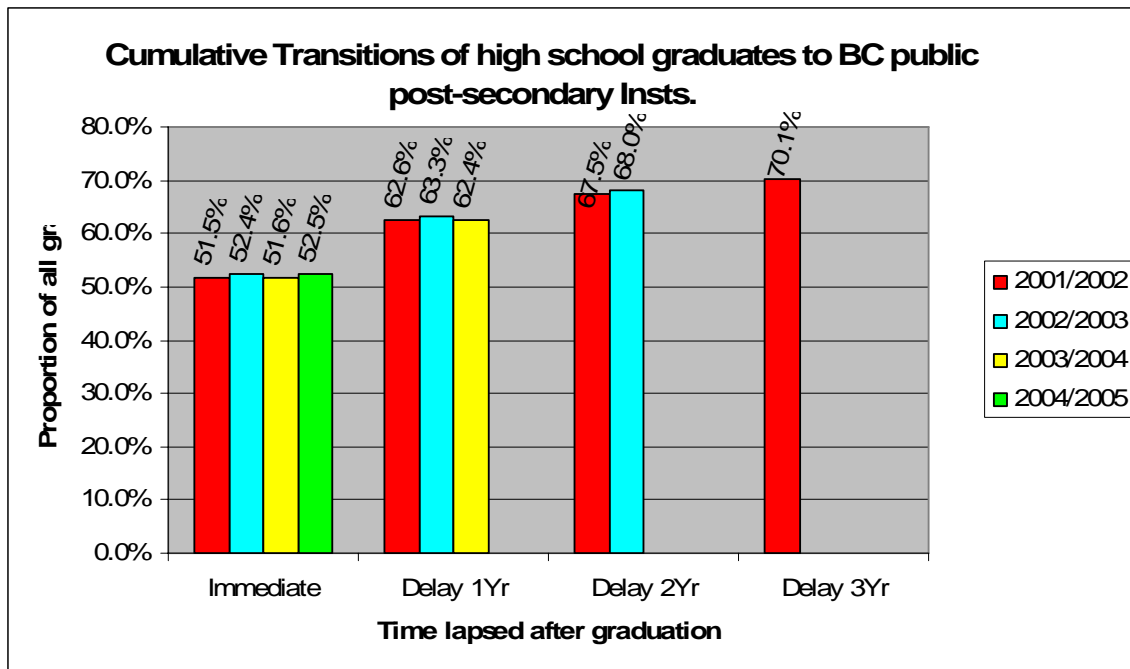
Code	Name	Institution Type	Notes
BCIT	B.C. Inst of Technology	INSTITUTE	
CAM	Camosun College	URBAN COLLEGE	
CAP	Capilano College	URBAN COLLEGE	
CNC	College of New Caledonia	SMALL COLLEGE	
COTR	College of the Rockies	SMALL COLLEGE	
DOUG	Douglas College	URBAN COLLEGE	
ECI	Emily Carr Inst of Art and Design	INSTITUTE	
IIG	Institute of Indigenous Govt	INSTITUTE	
JIBC	Justice Institute of B.C.	INSTITUTE	
KWAN	Kwantlen University College	UNIVERSITY COLLEGE	
LANG	Langara College	URBAN COLLEGE	
MAL	Malaspina University-College	UNIVERSITY COLLEGE	
NIC	North Island College	SMALL COLLEGE	
NLC	Northern Lights College	SMALL COLLEGE	
NVIT	Nicola Valley Inst of Tech	INSTITUTE	
NWCC	Northwest Comm College	SMALL COLLEGE	
OKAN	Okanagan College	URBAN COLLEGE	Formerly OUC
OLA	Open Learning Agency	INSTITUTE	See TRU-OL
OUC	Okanagan University College	UNIVERSITY COLLEGE	Degree programs transferred to UBCO, renamed OKAN
RRU	Royal Roads University	UNIVERSITY	
SEL	Selkirk College	SMALL COLLEGE	
SFU	Simon Fraser University	UNIVERSITY	
TRU	Thompson Rivers University	UNIVERSITY	Formerly UCC
TRU-OL	TRU Open Learning	UNIVERSITY	Formerly OLA. Part of TRU
UBC	University of BC	UNIVERSITY	
UBCO	University of BC Okanagan	UNIVERSITY	New 2005
UCC	University College of the Cariboo	UNIVERSITY COLLEGE	See TRU
UCFV	University College of the Fraser Valley	UNIVERSITY COLLEGE	
UNBC	University of Northern BC	UNIVERSITY	
UVIC	University of Victoria	UNIVERSITY	
VCC	Vancouver Community College	URBAN COLLEGE	

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**Update on overall transition rates**

For the four B.C. secondary school graduating cohorts in the years 2001/02 to 2004/05 about 52% had enrolled for the first time in a B.C. public post-secondary institution in the first year following their graduation (immediate transitions). In the second year, (D1 year or entry delayed by one year after graduation) a further 11% of that graduating class had enrolled. In the third year (D2 year), a further 5% had enrolled and, four years after graduation (D3 year), a further 3% of that same graduating class had enrolled for the first time at a B.C. public post-secondary institution, giving a cumulative transition rate of about 70%. This is consistent with the data presented in June 2006. (See “Student Transitions Project Highlights Research Question 2”)

**Fig. 1: Cumulative transitions of B.C. Secondary school graduates to B.C. public post-secondary institutions.**



Each succeeding graduation cohort had one fewer year of opportunity to attend a public post-secondary institution within this study period, so, as expected, the actual overall transition rates for successive graduation cohorts after 2001/02 are lower – 68% (2002/03), - 62% (2003/04) and 53% (2004/05). The rates for these cohorts are expected to equal the rate for 2001/02 after a lapse of 4 years following graduation. Note that this measures first time attendance and does not indicate that the student remained enrolled after transition.

Although the number of secondary school graduates has fallen by 2% in the period 2001/02 to 2004/05, the number of B.C. graduates enrolling for the

first time at a B.C. public post-secondary institution in the year following their graduation has not changed significantly, indicating a small increase in participation, at least immediately after graduation.

**Fig. 2: B.C. Secondary school graduates who enter B.C. public post-secondary institutions within 4 years**

Secondary School Grad Year	Post-Secondary Entry Year				No Transition Yet	Total High School Grads	Change	Change
	2002/03	2003/04	2004/05	2005/06			Immediate post-secondary entry vs 2002/03 entry	Total graduates vs 2001/02 grad year
2001/02	21,217	4,577	1,979	1,110	12,292	41,175	n/a	n/a
2002/03		21,821	4,518	1,956	13,319	41,614	+ 2.8%	+ 1.1%
2003/04			20,436	4,262	14,877	39,575	- 3.7%	- 3.9%
2004/05				21,196	19,162	40,358	- 0.1%	- 2.0%

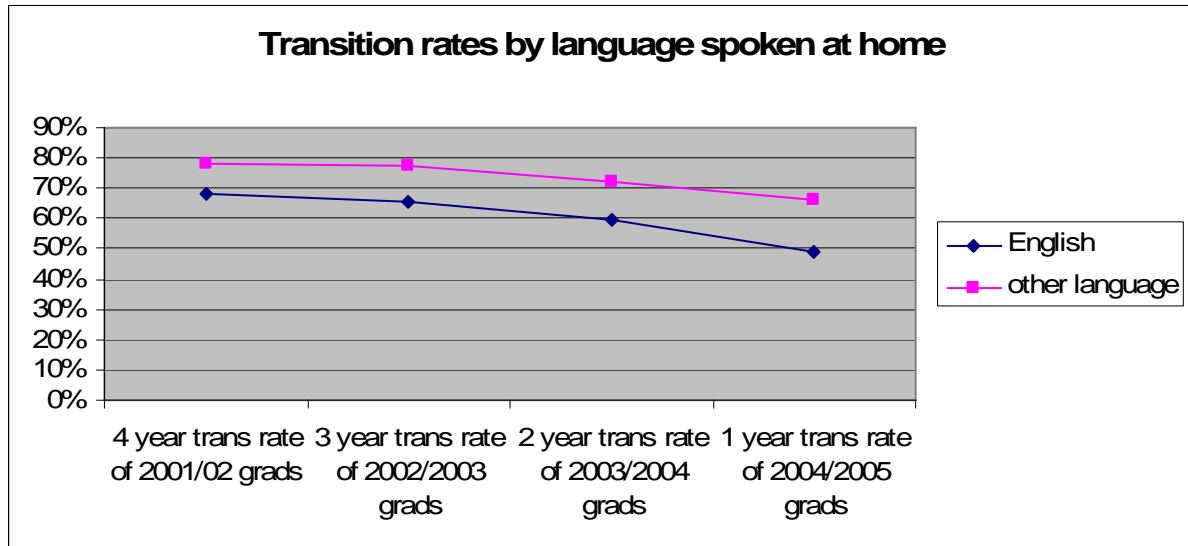
(Note: Data to be published in response to Research Question #4 are slightly different for 2002/03 to 2004/05 graduates – the data in Fig 2 exclude early entry students, who began studying at a post-secondary institution before or during their secondary school graduating year and then did not subsequently enroll in any B.C. post-secondary institution).

The rate of transition to a public post-secondary institution is slightly higher for females (72% of 2001/02 grads) than for males (68%).

The rate is lower for students identified in secondary school as aboriginal (62% of 2001/02 graduates).

Based on language spoken at home, speakers of Persian, Punjabi, Chinese (unspecified), Cantonese and Russian showed significantly higher transition rates than those who spoke English. Although this is not true for every language other than English, there are sufficient of these graduates that overall, those who did not speak English in the home (as reported by secondary schools) enrolled in post-secondary institutions at a higher rate than those who spoke English at home. Further, English speakers are more likely to delay their transitions than non-English speakers, as shown by the divergence of the trend lines.

**Fig. 3: Transition rates of B.C. Secondary school graduates whose language spoken at home was English versus other than English**



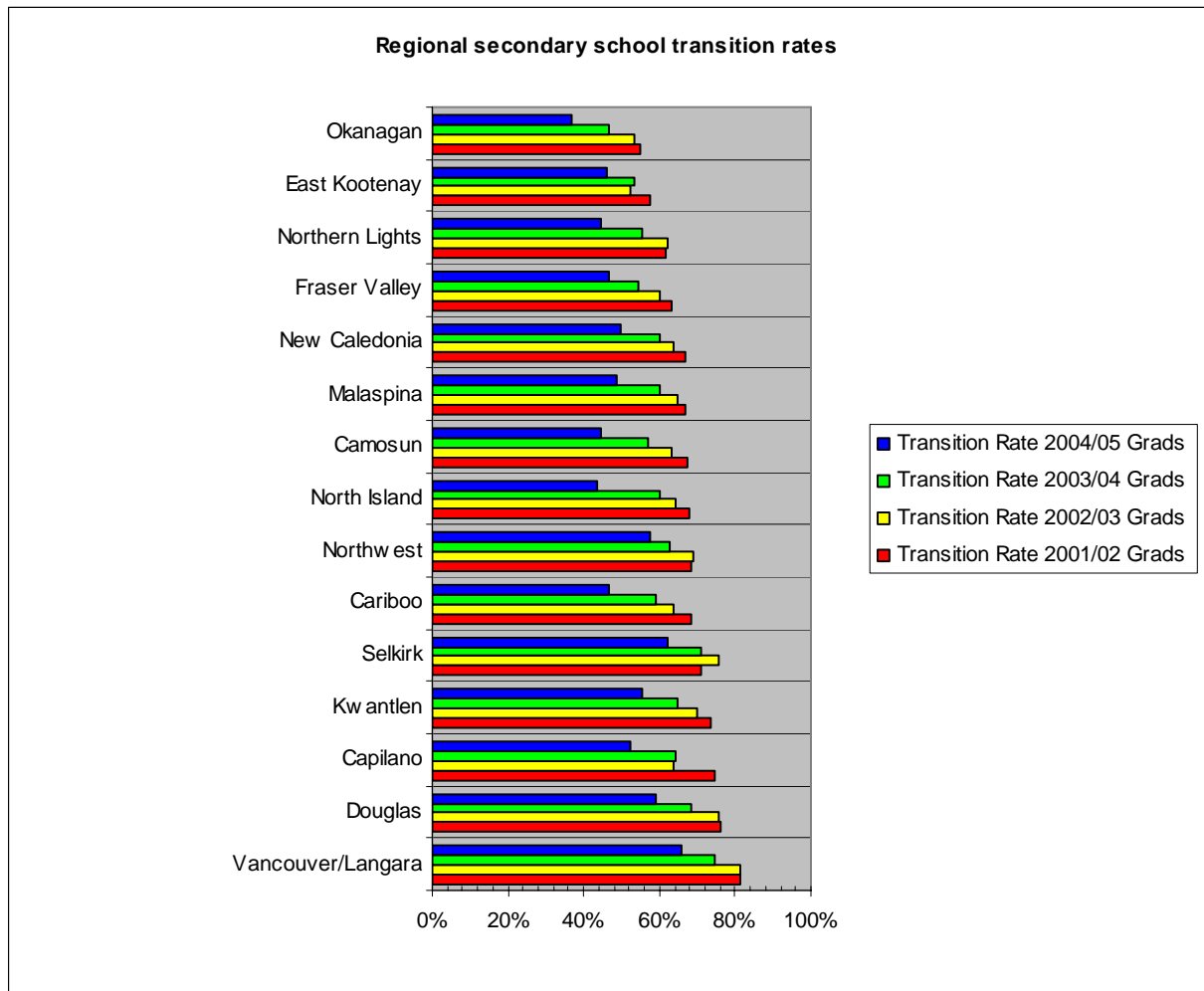
### Regional Differences

The overall transition rates of graduates vary considerably by region (based on the college district in which the secondary school is located), with generally higher rates in the Lower Mainland and lower rates in rural and provincial border regions. The region with the lowest rate was the Okanagan at 55% of all 2001/02 graduates. Rates for subsequent years are lower because of fewer years of opportunity for transition, but the relative rankings appear to be generally stable. Transition rates for regions that border on Alberta might be affected by the expected higher proportion of B.C. graduates who choose to attend nearby Alberta institutions, such as the University of Calgary, NAIT, etc, rather than a B.C. institution.

**Fig. 4: Regional transition rates of secondary school graduates**

College Region of Secondary School	Cumulative 4 year transition rate of 2001/02 Grads	Cumulative 3 year transition rate of 2002/03 Grads	Cumulative 2 year transition rate of 2003/04 Grads	Transition Rate 2004/05 Grads immediately after graduation
Vancouver/Langara	81%	81%	75%	66%
Douglas	76%	76%	68%	59%
Capilano	74%	64%	64%	53%
Kwantlen	73%	70%	65%	56%
Selkirk	71%	76%	71%	62%
Cariboo	68%	64%	59%	47%
Northwest	68%	69%	63%	57%
North Island	68%	64%	60%	44%
Camosun	67%	63%	57%	45%
Malaspina	67%	65%	60%	49%
New Caledonia	67%	64%	60%	50%
Fraser Valley	63%	60%	54%	47%
Northern Lights	62%	62%	55%	45%
East Kootenay	58%	52%	53%	46%
Okanagan	55%	53%	47%	37%
All B.C regions.	70%	68%	62%	53%

**Fig. 5: Regional cumulative transition rates of secondary school graduates**



Graduates from independent schools enter B.C. public post-secondary institutions at a significantly lower rate (64% of 2001/02 grads) than their counterparts from public schools. The reason for this is unknown, except that enrollment data are currently not collected by the Student Transition Project for independent or private post-secondary institutions, leading to some under-reporting. It is reasonable to assume that graduates of independent secondary schools might attend private post-secondary institutions at a higher frequency than graduates from B.C. public secondary schools. In addition, they might be more likely to enroll in out-of-province post-secondary institutions.

## Effect on transition rates of academic gpa and university admissibility

Using a generic set of criteria that closely match the general or arts admission requirements for the oldest 4 provincial universities and for UBC Okanagan, modeling can show whether a graduate met those requirements, in terms of both specific courses and a minimum threshold average (see above for a definition).

Secondary school graduates can be categorized in three ways:

- they meet the generic definition of university admissibility;
- they have the 'academic' courses specified, but fall short of the required 75% average; and,
- they do not fulfill the universities' course requirements and no gpa can be calculated.

**Fig. 6: Graduates and university admissibility standards**

Secondary School Graduation Year	Grads admissible to a university	Grads with 50% - 74% academic gpa	Grads lacking required university entry courses	Total
2001/02	29%	16%	55%	100%
2002/03	31%	15%	55%	101%
2003/04	30%	14%	56%	100%
2004/05	32%	14%	54%	100%

### Graduates who were admissible to a university

**Fig. 7: Graduates and post-secondary enrollees who met university admissibility standards**

Secondary School Graduation Year	% of all graduates admissible to a university	% of admissible graduates who entered post-secondary without delay				Cumulative % of admissible graduates who entered post-secondary by 2005/06
		2002/03 Entry	2003/04 Entry	2004/05 Entry	2005/06 Entry	
2001/02	29%	73%				83%
2002/03	31%		74%			83%
2003/04	30%			72%		79%
2004/05	32%				72%	72%

The proportion of graduates who are university admissible has increased slightly between 2001/02 to 2004/05 from about 30% to about 32%. (Females are somewhat higher and males somewhat lower).

These graduates are the most likely to make a transition to a B.C. public post-secondary institution. About 83% enrolled at a public post-secondary institution, two or more years after graduation compared with 70% of overall graduates.

Aboriginal graduates who are university admissible using the same definition have varied from 8% to 9% of aboriginal graduates. 90% of these admissible graduates transitioned to a public post-secondary institution two or more years after graduation.

**Graduates who had the courses required for university admission but whose academic gpas were below 75%**

Graduates who met generic university entry course requirements, but did not meet the assumed 75% academic gpa threshold for university entry, behaved more like university admissible graduates than the group that did not take the required university entry courses, but they were more likely to delay their entry.

**Fig. 8: Graduates who lacked required 75% academic gpa for university entry but had the required courses.**

Secondary School Graduation Year	% of all graduates with 50% - 74% academic gpa	% of graduates with 50% - 74% academic gpa who entered post-secondary without delay				Cumulative % of graduates with 50% - 74% academic gpa who entered post-secondary by 2005/06
		2002/03 Entry	2003/04 Entry	2004/05 Entry	2005/06 Entry	
2001/02	16%	62%				80%
2002/03	15%		62%			79%
2003/04	14%			63%		74%
2004/05	14%				63%	63%

**Graduates who were not directly admissible to a university**

Graduates who chose secondary school graduation programs that did not lead to university entry show up in B.C. post-secondary institutions in large numbers, but their participation is at a lower rate. Four years after graduating, 60% of them had attended a post-secondary institution, compared with over 80% of their fellow graduates who had chosen secondary school courses that met the entry requirements set by the universities.

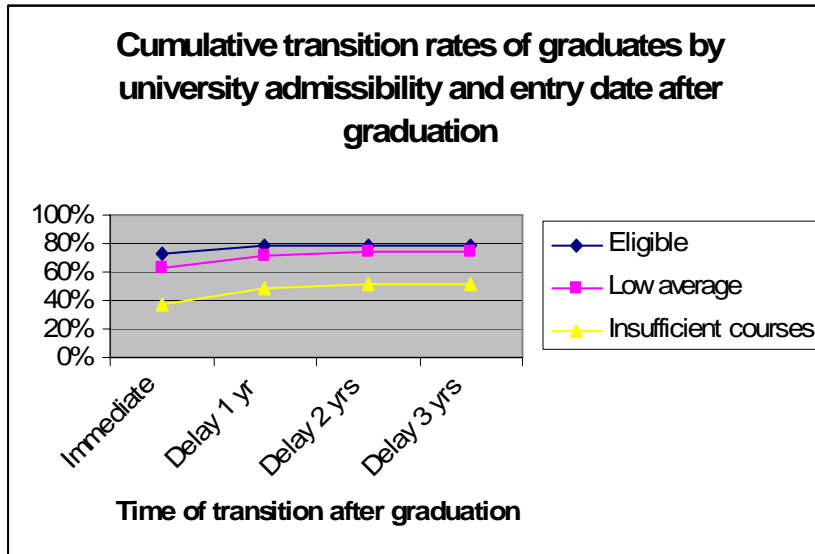
**Fig. 9: Graduates who lacked required courses for university entry**

Secondary School Graduation Year	% of all graduates lacking required university entry courses	% of graduates lacking university entry courses who entered post-secondary without delay				Cumulative % of graduates lacking university entry courses who entered post-secondary by 2005/06
		2002/03 Entry	2003/04 Entry	2004/05 Entry	2005/06 Entry	
2001/02	55%	37%				60%
2002/03	55%		38%			56%
2003/04	56%			38%		50%
2004/05	54%				38%	38%

Graduates who are university admissible were more likely to enroll in a post-secondary institution soon after graduation compared with those who were not initially admissible.

Graduates who were not university admissible are more likely to delay post-secondary entry for one or more years, and never achieve the same cumulative transition rates as university admissible graduates.

**Fig. 10: Cumulative transition rates of graduates by university admissibility and entry date after graduation**

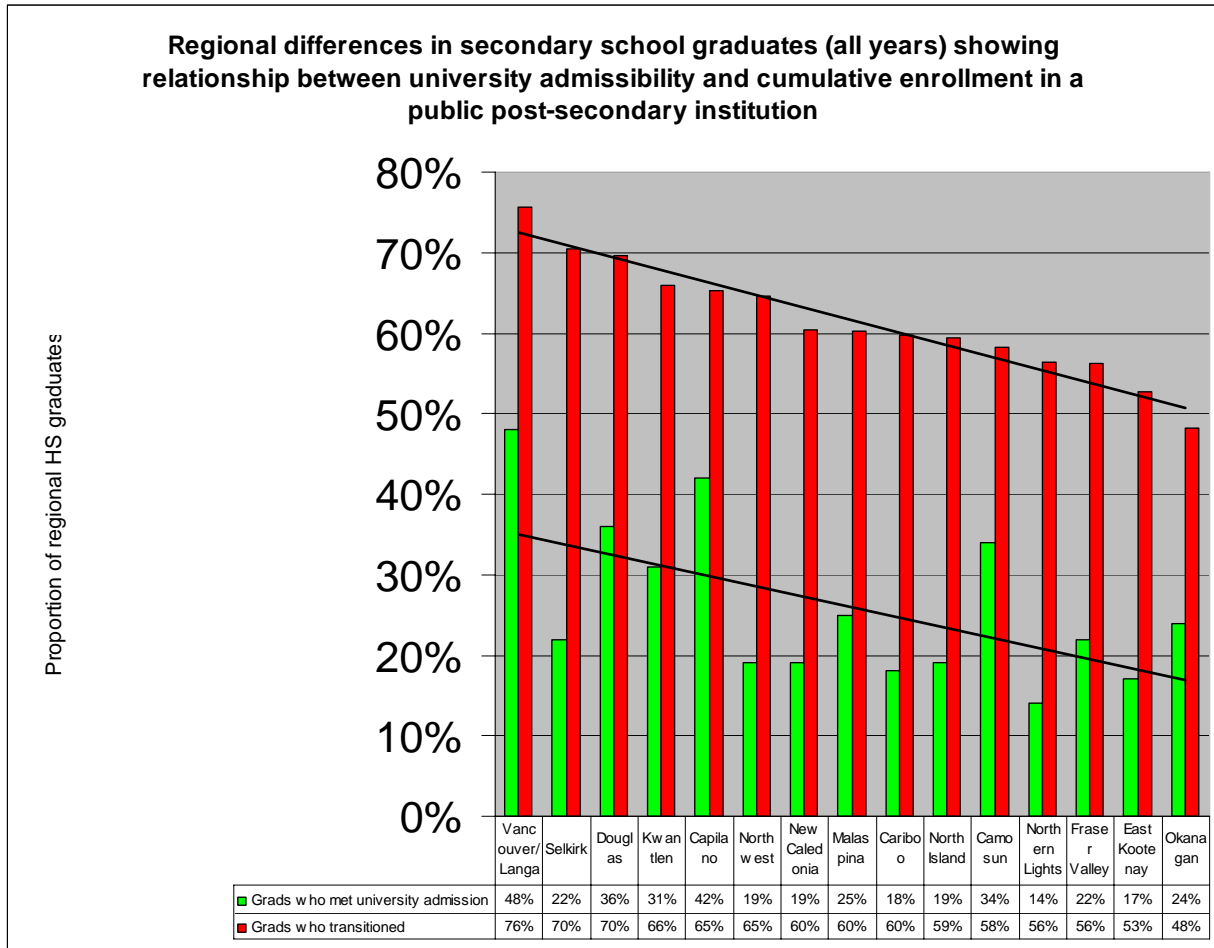


Rates of university entrance admissibility vary widely by region, possibly indicating that the course of study taken by most students, ostensibly under a common Province-wide curriculum, is by no means consistent across the Province. Secondary school program or course choices strongly indicate the probability that a graduate will engage in post-secondary studies.

**Fig. 11: Graduates who met generic university entry requirements – by region**

College Region	Proportion of graduates meeting university entry requirements (all years)	Cumulative proportion of graduate enrolling in post-secondary (all years)
Vancouver/Langara	48%	76%
Capilano	42%	65%
Douglas	36%	70%
Camosun	34%	58%
Kwantlen	31%	66%
Malaspina	25%	60%
Okanagan	24%	48%
Fraser Valley	22%	56%
Selkirk	22%	70%
Northwest	19%	65%
North Island	19%	59%
New Caledonia	19%	60%
Cariboo	18%	60%
East Kootenay	17%	53%
Northern Lights	14%	56%
All regions of B.C.	37%	63%

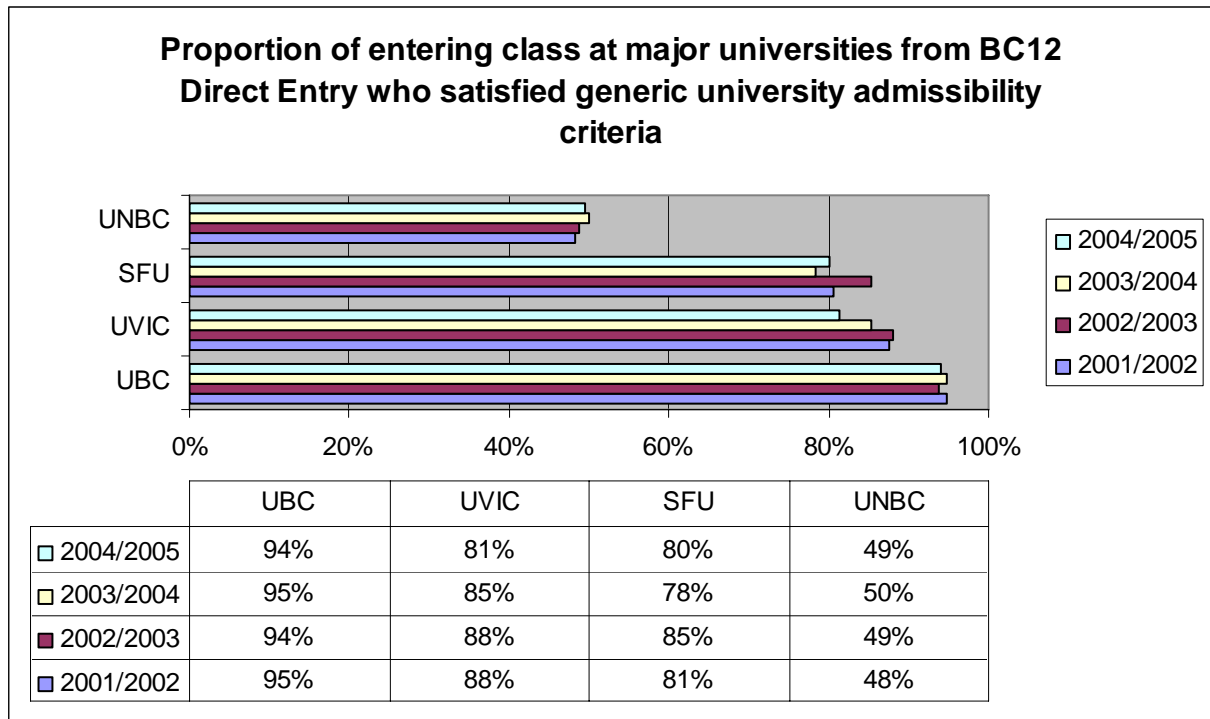
**Fig. 12: Regional differences in secondary school graduates (all years) showing relationship between university admissibility and cumulative enrollment in a public post-secondary institution**



**Direct entries of B.C. secondary school graduates to major B.C. universities**

Not all of the graduates who enrolled immediately after graduating met the generic university admissibility criteria. In some cases, the exceptions exceeded the number who met these criteria.

**Fig 12A: Proportion of entering class at major universities from B.C.12 Direct Entry who satisfied generic university admissibility criteria**



Whereas about 95% of UBC’s entering class met the generic admissibility criteria, only 50% of UNBC’s met these same criteria, suggesting that these criteria are less widely used in university admission than was previously believed.

## Post-secondary programs of study

The institutions that report data to the Central Data Warehouse (CDW) classify their programs differently from the universities. The figure below refers only to first year students, who are admissible to some university professional programs, such as Engineering, but are not admissible to most university professional programs, such as Dentistry and Library Science.

**Fig. 13: Programs taken by 2001/02 graduates who made immediate transitions to post-secondary institutions**

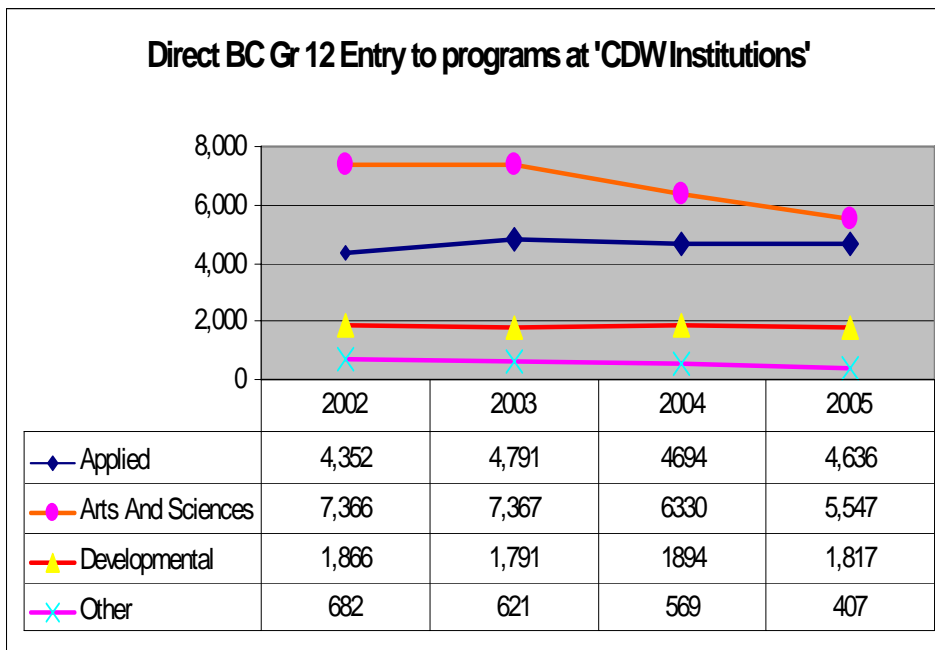
	Applied	Arts and Sciences	Developmental	Other	University - General	University Health Sciences	University - Professional	Total
SFU					1,747		322	2,069
UBC	<5			103	2,611	48	637	3,402
UNBC					291	8	39	337
UVIC					1,076		66	1,142
KWAN	834	1,338	104	27				2,303
MAL	248	341	216	18				823
OUC	287	588	82					957
UCC	253	588	136	7				983
UCFV	278	674	154	6				1,112
CAM	160	298	224	37				719
CAP	232	692	43					967
DOUG	402	852	34	<5				1,288
LANG	87	1,213	66	5				1,371
VCC	300	<5	108	25				433
CNC	139	257	89	9				494
COTR	109	55	100					264
NIC	89	185	158	<5				433
NLC	53	49	93	<5				196
NWCC	30	96	46	<5				173
SEL	73	139	153	8				372
BCIT	690		36	290				1,016
ECI	61		26					87
IIG	<5							<5
JIBC	24	<5		29				54
NVIT				9				9
OLA	<5	<5		206				211
TOTALS	4,356	7,366	1,866	785	5,726	56	1,063	21,217

**Choices of post-secondary programs by subsequent cohorts**

Between the 2001/02 graduation class and that of 4 years later, some shifts in program choices in their immediate transition year are evident.

Arts and Science intakes at the CDW institutions trended downwards while intakes to Applied programs remained stable. This has implications for the future supply of transfer students to universities and university colleges.

**Fig. 14: Programs in 'CDW institutions' entered by new B.C. graduates (direct entry)**



Trends in choice of institution by new B.C. graduates over this period are also of interest. Some institutions were re-assigned between categories or were newly created, so not all trend lines are continuous.

Fig. 15: Entry trend by new B.C. graduates (direct entry) to Institutes

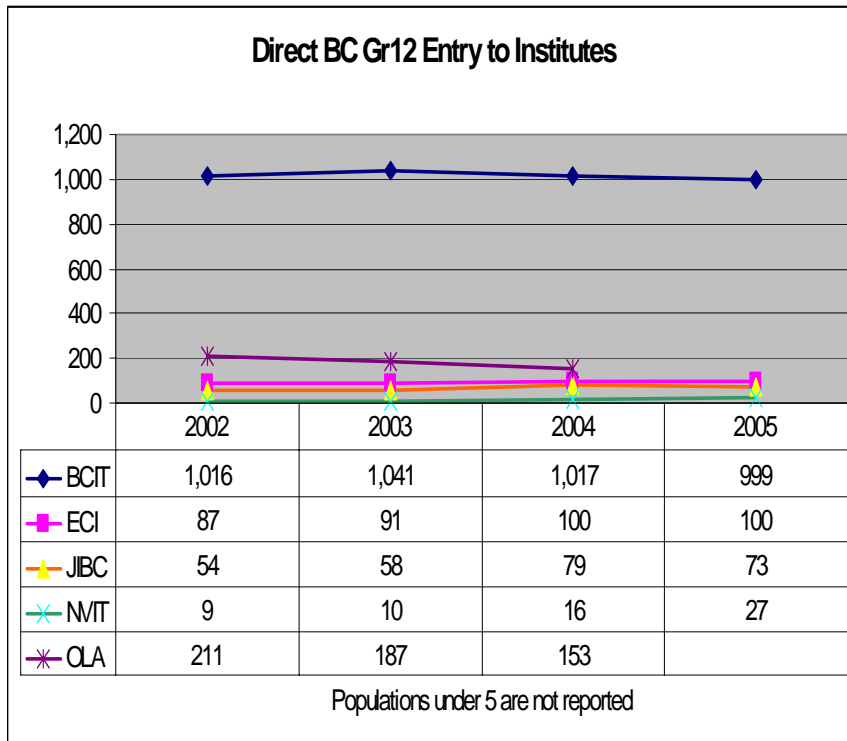


Fig. 16 Entry trend by new B.C. graduates (direct entry) to Small Colleges

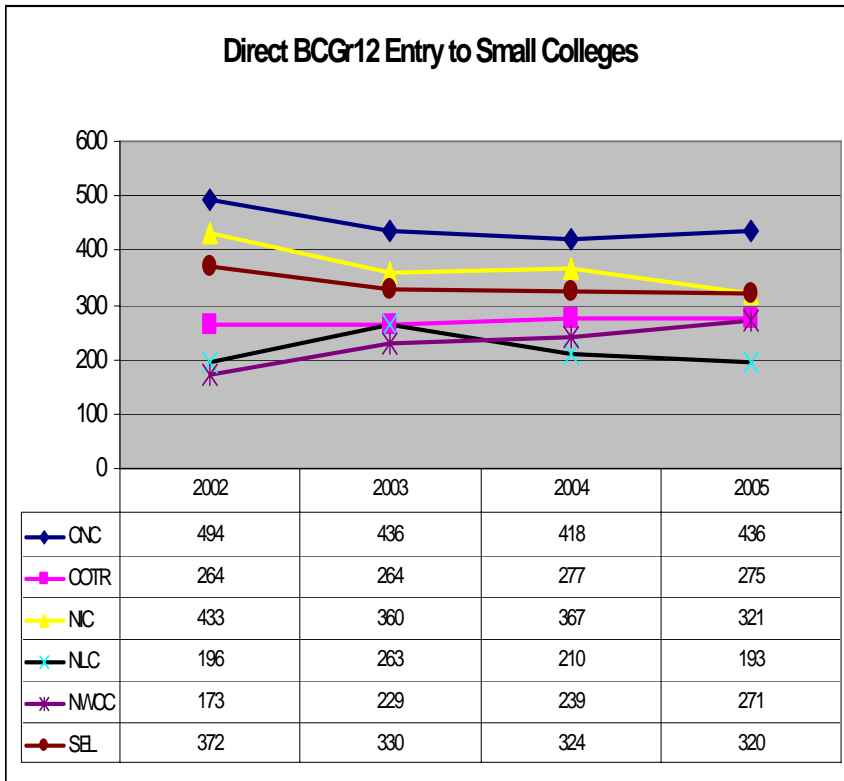


Fig. 17: Entry trend by new B.C. graduates (direct entry) to Urban Colleges

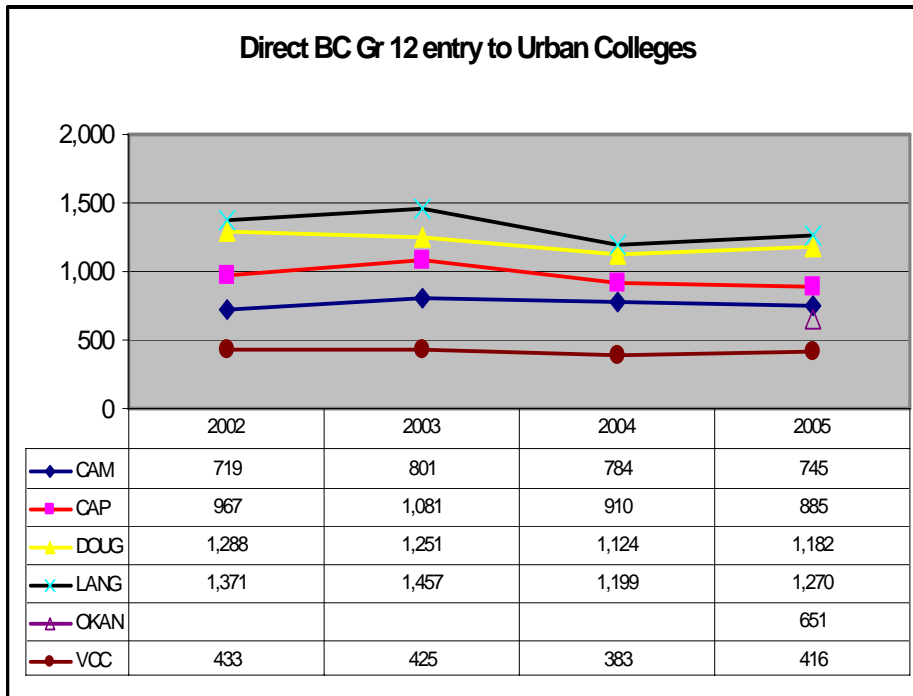


Fig. 18: Entry trend by new B.C. graduates (direct entry) to University Colleges

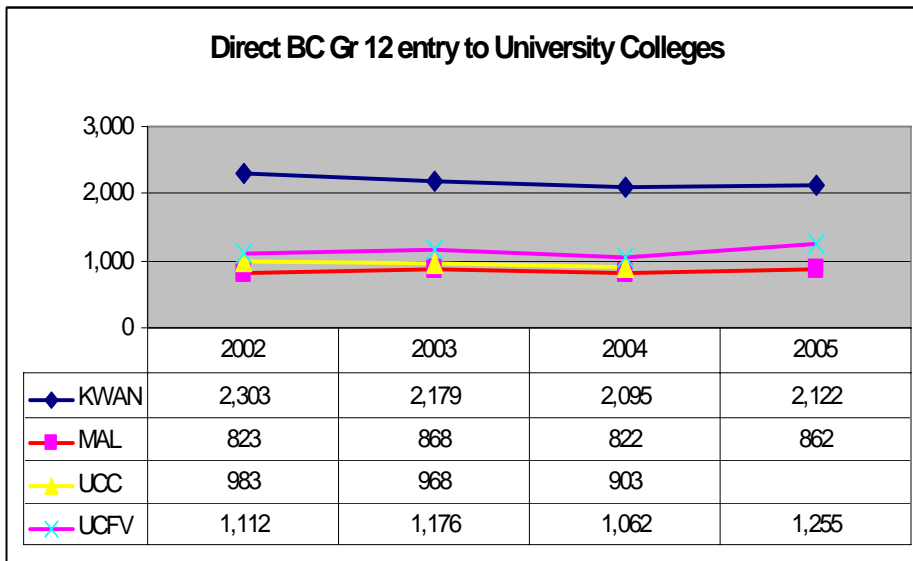
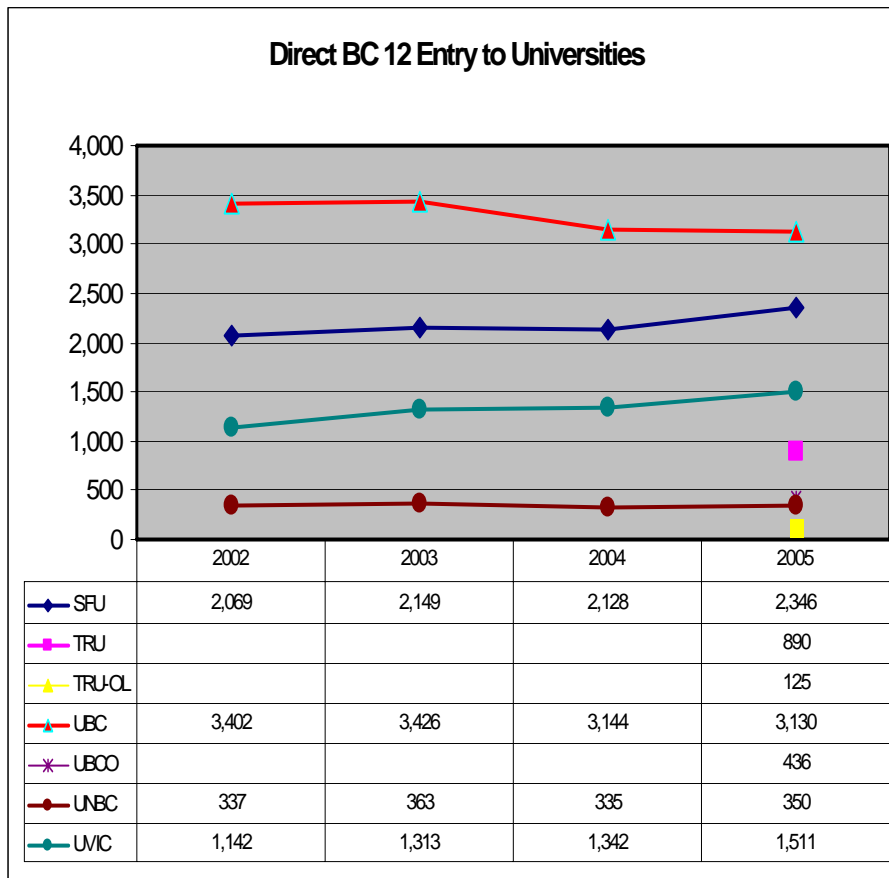


Fig. 19: Entry trend by new B.C. graduates (direct entry) to Universities



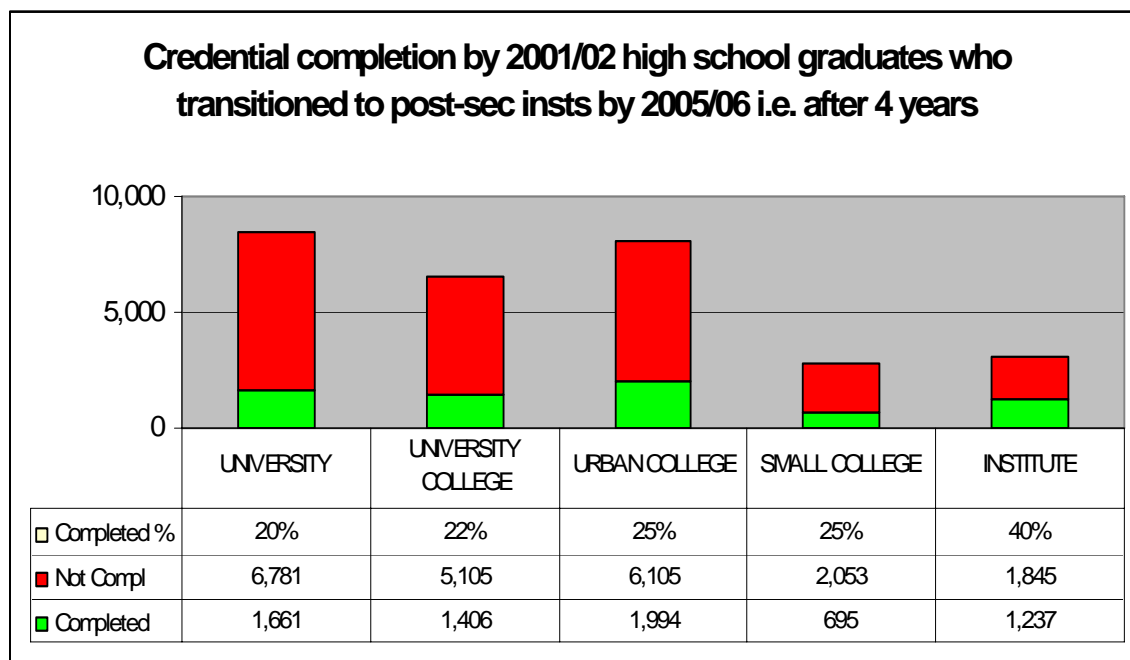
## Completion of credentials

### Program completers

Of the 2001/02 graduating class, those who transitioned immediately to post-secondary institutions are much more likely to complete a program (13.5% of all graduates) than those who transitioned later (less than 3% of all graduates), presumably because they had sufficient time to complete. Another explanation might be that they were better qualified at the time that they graduated, as suggested by Fig. 10.

The highest rate of completion was among students who attended "institutes" possibly because of their generally shorter, more structured programs.

**Fig. 20: Credential completion rates of 2001/02 secondary school graduates after 4 years**



The credentials awarded spanned a broad range, as shown in Fig. 21. This study does not cover a long enough period for standard completion of 4 year credentials, such as Bachelors' degrees, although over 1600 were awarded in 2005/06 to 2001/02 secondary school graduates. Success rates in such programs are normally first measured 5 years after their start.

Credentials awarded to students who attended urban colleges and small colleges are typically one or two years in length, hence similar to most credentials typically offered by 'institutes'. However, credential completion rates at these three types of institutions were clearly dissimilar: students completed credentials at institutes with much higher frequency than at urban

or small colleges. The mix of credentials offered by university colleges is broader, so it is difficult to compare their completion rates with other colleges and with institutes. Also, some institutes, such as BCIT, offered 4 year credentials in this period.

Within each institution type, a wide variation of completion rates is apparent. Among the large universities, UBC showed a credential completion rate for 2001/02 secondary school graduates of 29% by 2005/06, far higher than any other large university. Among institutes, 54% of the 2001/02 secondary school graduates who transitioned immediately to BCIT had completed a credential by 2005/06.

Four years after entry, 6% of the 2001/02 graduates who transitioned had earned a bachelor's degree, but as stated elsewhere, the standard measure of timely completion is normally taken 5 years after first enrollment.

The reasons underlying these observations of varying completion rates are not known and merit further study. Some students, particularly those attending colleges, might place less value on achieving a credential, such as a Certificate or Diploma, than in completing specific courses and achieving desired learning outcomes. It is also known that students intending to transfer to a university often do not complete credentials while at the college level.

**Fig. 21: Types of credentials awarded to 2001/02 graduates**

<b>Credential</b>	<b>Post-secondary Type</b>	2002/03	2003/04	2004/05	2005/06	<b>Total</b>
Apprenticeship	Urban College		9	<5		10
	Small College	<5	10	11	19	44
	Institute		<5	<5		3
Sub total	All	<5	20	14	19	57
Assoc Degree	University				<5	<5
	University-College		35	88	44	167
	Urban College		39	161	89	289
	Small College		13	14	8	35
Sub total	All		87	263	142	492
Certificate	University				37	37
	University-College	211	260	202	121	794
	Urban College	230	376	303	237	1146
	Small College	169	163	125	80	537
	Institute	123	256	201	155	735
Sub total	All	733	1055	831	630	3249
Diploma	University				36	36
	University-College	<5	86	173	109	371
	Urban College		160	312	259	731
	Small College	5	56	69	38	168
	Institute	<5	185	260	243	689
Sub total	All	9	487	814	685	1995
Other	University-College		<5	<5	<5	10
	Urban College			5	<5	6
	Small College				<5	<5
Sub total	All		<5	8	5	17
Bach Degree	University			19	1444	1463
	University-College			<5	92	95
	Urban College			<5	16	18
	Institute			6	41	47
Sub total	All			30	1593	1623
Developmental	University-College	<5	<5	<5	<5	8
	Urban College	15	7	6	<5	31
Sub total	All	16	11	8	<5	39
Short Certificate	University-College	<5	<5	<5	<5	6
	Urban College	<5	<5	<5		5
Sub total	All	<5	<5	<5	<5	11
University Diploma	University		5	15	21	41
<b>Total</b>		<b>764</b>	<b>1672</b>	<b>1986</b>	<b>3102</b>	<b>7524</b>

Some 2001/02 graduates completed more than one credential and each has been counted. 6,435 individual graduates from this cohort had completed credentials.

This information can be presented by institution rather than by type of credential:

**Fig. 22: Cumulative credentials awarded to 2001/02 graduates by 2005/06, by institution and credential type**

Institution	Development, other	Certificate	Diploma	Apprentice	Associate Degree	Bachelor Degree
BCIT	0	678	686	<5	0	18
CAM	15	242	124	0	57	0
CAP	7	161	116	10	65	5
CNC	<5	143	53	0	<5	0
COTR	0	138	20	16	11	0
DOUG	14	84	182	0	101	0
ECI	0	0	0	0	0	29
IIG	0	<5	0	0	0	0
JIBC	0	53	0	0	0	0
KWAN	12	216	149	0	131	18
LANG	0	9	136	0	66	0
MAL	<5	223	83	0	7	29
NIC	0	88	11	0	<5	0
NLC	0	25	10	28	<5	0
NVIT	0	0	<5	0	0	0
NWCC	0	54	<5	0	6	0
OKAN	<5	198	121	0	0	13
OLA	0	<5	0	0	0	0
SEL	0	89	70	0	13	0
SFU	0	0	34	0	0	143
TRU	0	36	35	0	<5	45
TRU-OL	0	<5	<5	0	0	0
UBC	0	0	0	0	0	1008
UBCO	0	0	0	0	0	41
UCC	0	137	53	0	5	<5
UCFV	<5	224	86	0	24	47
UNBC	0	0	<5	0	0	51
UVIC	0	0	<5	0	0	175
VCC	0	457	52	0	0	0
TOTALS	56	3260	2036	57	492	1623

## Attendance Patterns

### General Patterns

Overall attendance patterns for each of the graduating cohorts in the study are given in Fig. 23. The more recent graduates have had less opportunity to participate, so year-to-year comparisons are not valid.

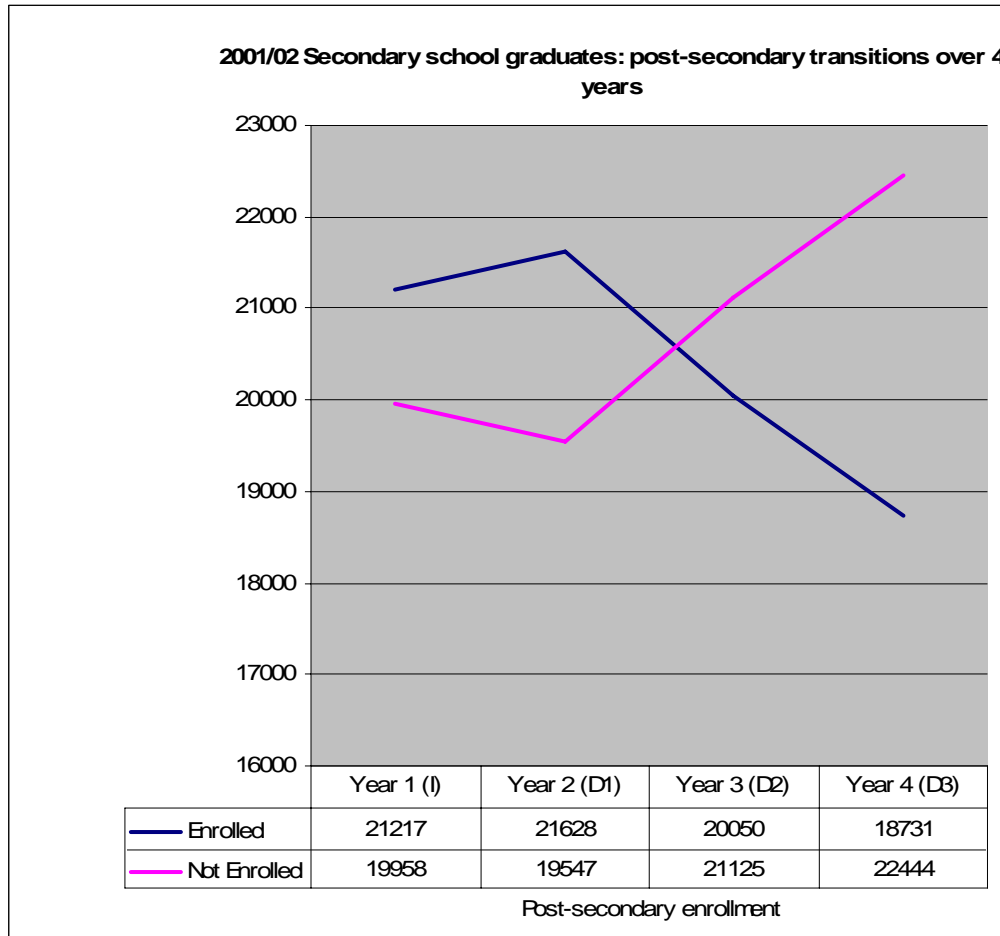
A student who attended continuously was enrolled at a post-secondary institution at some time during each year after she or he first attended a post-secondary institution. A student who persisted but stopped out a year was enrolled in a post-secondary institution in 2005/06 but, after first enrolling, had stopped attending any public post-secondary institution for at least a year. Those who did not persist were no longer attending a public post-secondary institution in 2005/06. A distinction is made between students who completed or finished a credential and those who did not.

**Fig. 23: General attendance pattern by graduation cohort**

High School Grad Year	Continuously attended		Persisted -enrolled in 2005/06	Did not persist		Never attended to end 2005/06	Total
	Credential finished	No credential finished	Stopped out	Credential finished	No credential finished		
2001/02	4,071 (10%)	12,255 (30%)	2,405 (6%)	2,364 (6%)	7,788 (19%)	12,292 (30%)	41,175 (101%)
2002/03	2,421 (6%)	17,065 (41%)	1,132 (3%)	1,448 (3%)	6,228 (15%)	13,319 (32%)	41,613 (100%)
2003/04	1,789 (5%)	19,069 (48%)	n/a	495 (1%)	3,345 (8%)	14,877 (38%)	39,575 (100%)
2004/05	863 (2%)	20,333 (50%)	n/a	n/a	n/a	19,162 (47%)	40,358 (99%)
Total	9,144 (6%)	68,722 (42%)	3,537 (2%)	4,307 (3%)	17,361 (11%)	59,650 (37%)	162,720 (101%)

The 2001/02 graduating cohort has had four years of opportunity to enroll in post-secondary education. Their attendance peaked after two years.

**Fig. 24 2001/02 graduates attending and not attending**



**Continuous attendees**

Some graduates attended a post-secondary institution each academic year following secondary school graduation until they completed a credential and sometimes beyond.

As expected, continuous attendees are more likely to complete credentials and in a shorter time frame.

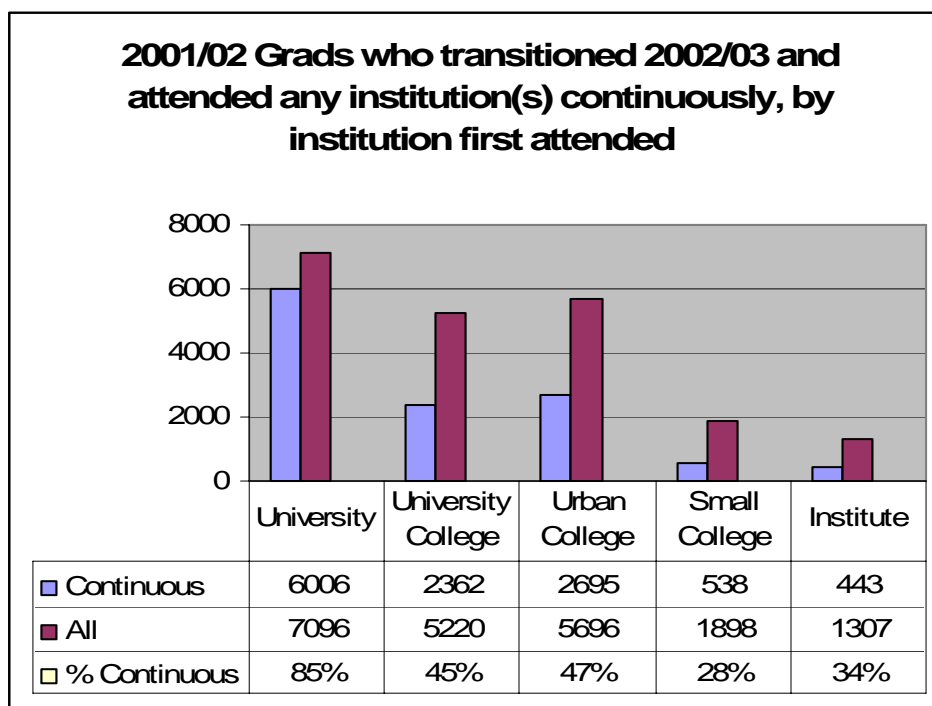
**Fig. 25: Continuous attendees and credential completion**

High School Grad Year	Continuous enrollees		All other enrollees		All enrollees
	Credential completed	Proportion of all who completed	Credential completed	Proportion of all who completed	Credential completed
2001/02	4,071	58%	2,922	42%	6,993
2002/03	2,421	59%	1,658	41%	4,079
2003/04	1,789	78%	495	22%	2,284
2004/05	863	100%	0	0%	863
All	9,144	64%	5,075	36%	14,219

The 2001/02 graduating cohort had four years to attend a post-secondary institution and be measured for their persistence. This varies, as expected, with the type of institution attended – short programs are unlikely to yield four years of continuous attendance. Females are significantly more likely to be in continuous enrollment than males.

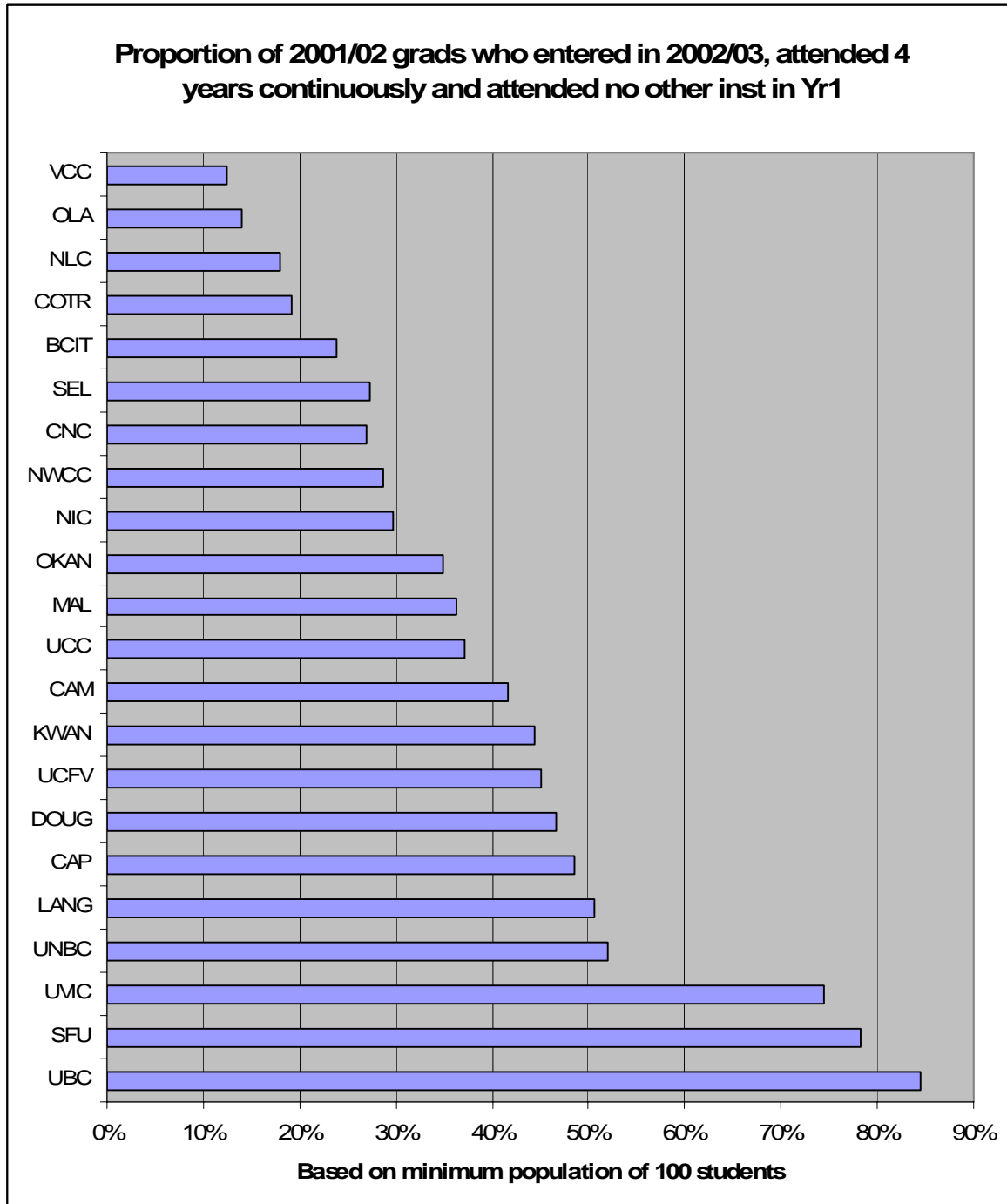
(There is some double-counting because individuals may have attended more than one type of institution).

**Fig. 26: 2001/02 Secondary school graduates who made an immediate transition and continuously attended any mix of public post-secondary institutions for four years, by type of institution first attended.**



Some of the students who attended continuously remained exclusively at one institution throughout the period. Research question 3b asked who “*remained at the same post-secondary institution throughout the entire reporting period*”. This has proved difficult to establish but, as a proxy, the following chart gives 2001/02 graduates who transitioned in 2002/03, attended continuously for four years and who in Year 1 attended no other institution. It is not known if these students attended the named institution exclusively in years 2, 3 and 4, but this is likely. Generally, institutions offering predominantly 4 year programs are more likely to retain students for the entire period, but there are significant variations between institutions of similar types.

**Fig. 27: 2001/02 Secondary school graduates who entered a post-secondary institution in 2002/03, attended continuously for 4 years and did not attend another institution in Year 1**

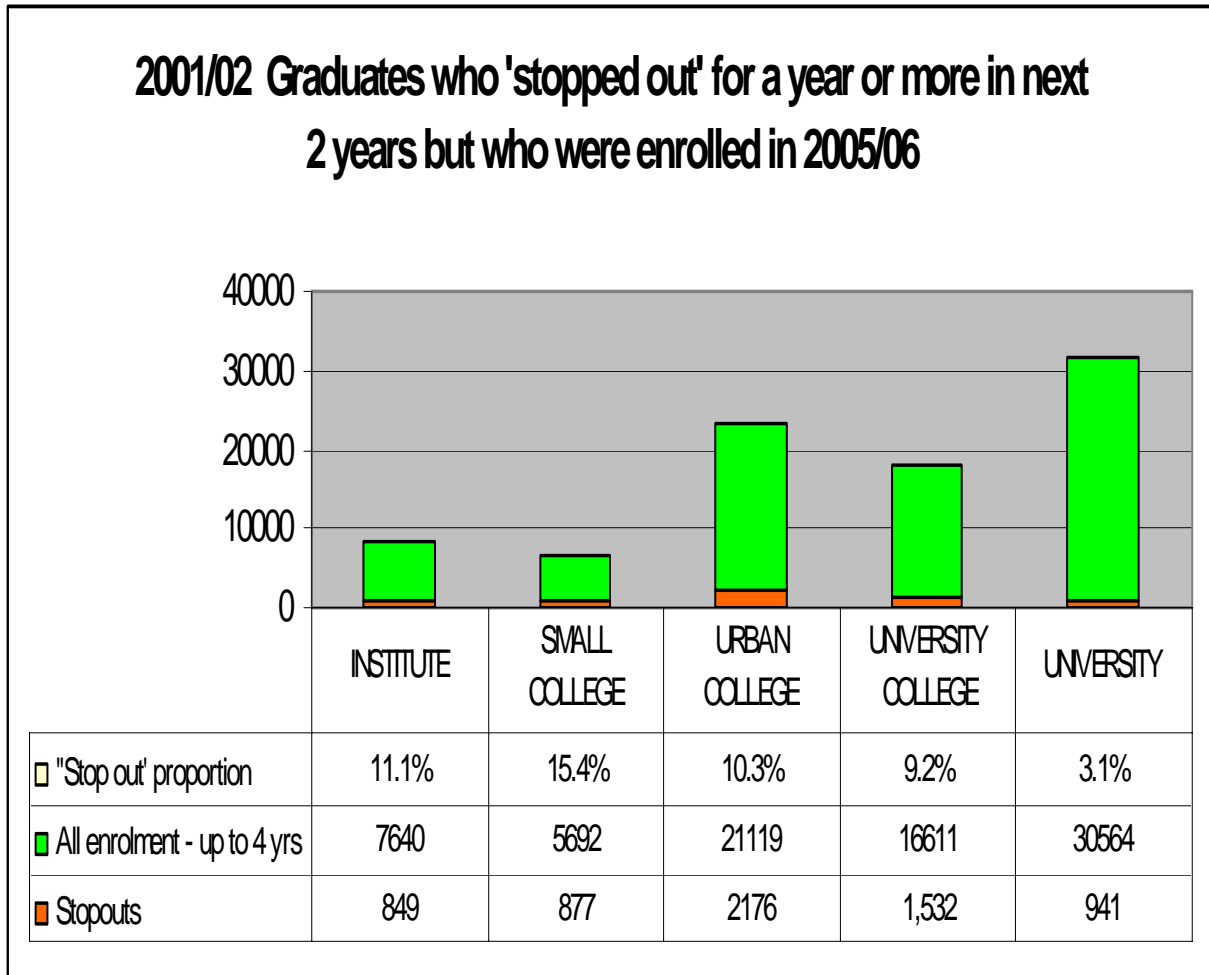


**Secondary school graduates who attended post-secondary institutions, left for at least a year, then returned ('stop outs')**

Among the first two cohorts of graduates in this study there were 1847 (8% of 2001/02 graduates who transitioned) and 922 (4% of 2002/03 graduates who transitioned) who did not complete a post-secondary credential and took a break of at least an academic year in their post-secondary education after first attending either as an immediate or a delayed entrant from secondary school. They were attending again by the time the study period ended. For subsequent graduation cohorts, it is too soon to identify such 'stop outs'.

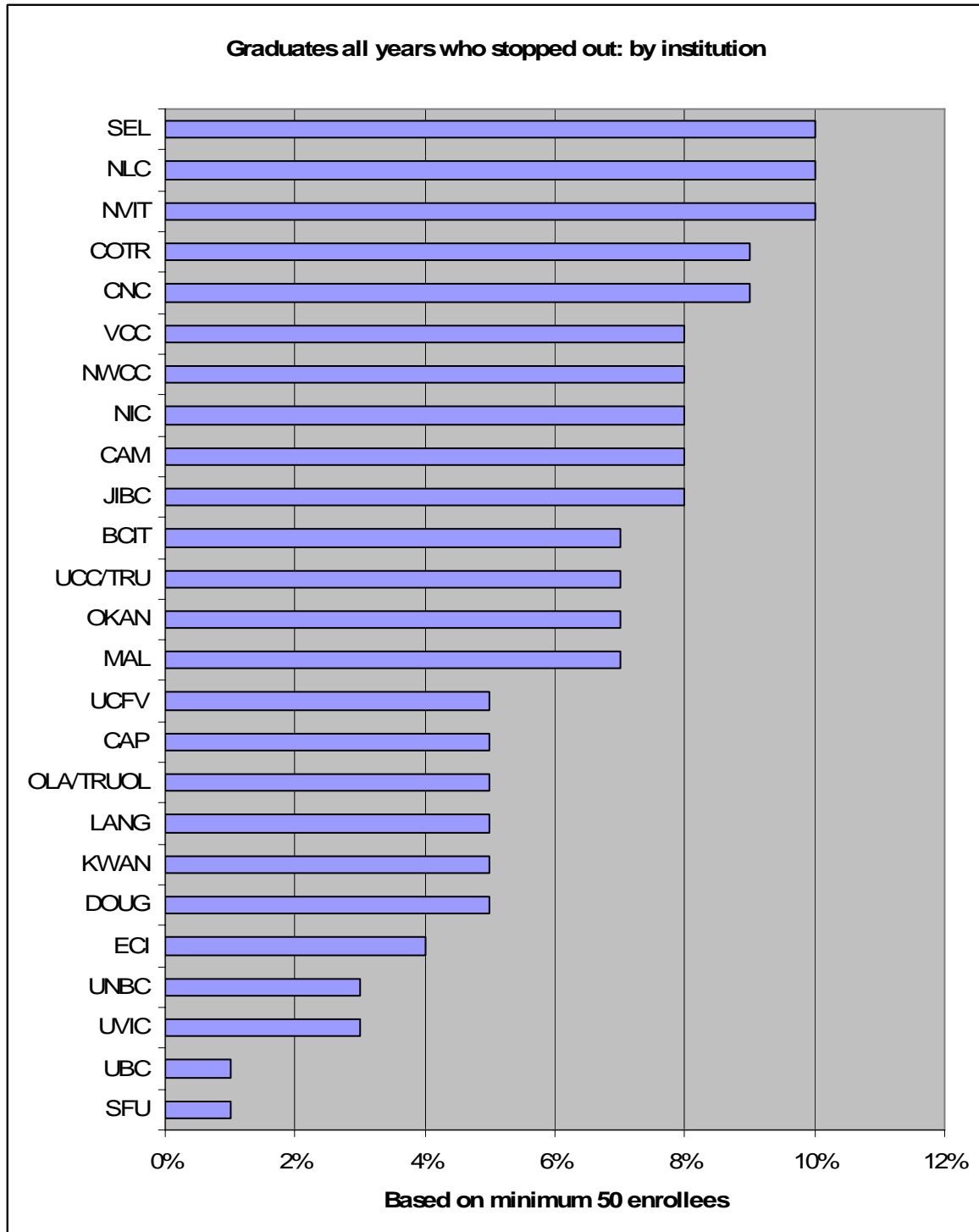
Analysis of individual records shows that an urban college is the institution type most commonly attended by such 'stop outs'. They are more likely to not enroll in their second and/or third years following secondary school graduation. They have, on average, weaker secondary school graduating averages. After the break in their education, they normally return to the institution and program attended previously.

**Fig. 28: 2001/02 Secondary school graduates (counted as year-enrollees for each year attended) who stopped attending for at least one year - by type of institution(s) attended (using fractional year enrollments if a student attended two different types of institution during one year)**



**Fig. 29: Secondary school graduates who stopped attending for at least one year by institution(s) attended**

(Excludes 2004/05 graduates and those who subsequently were enrolled in post-secondary institutions in 2005/06.)



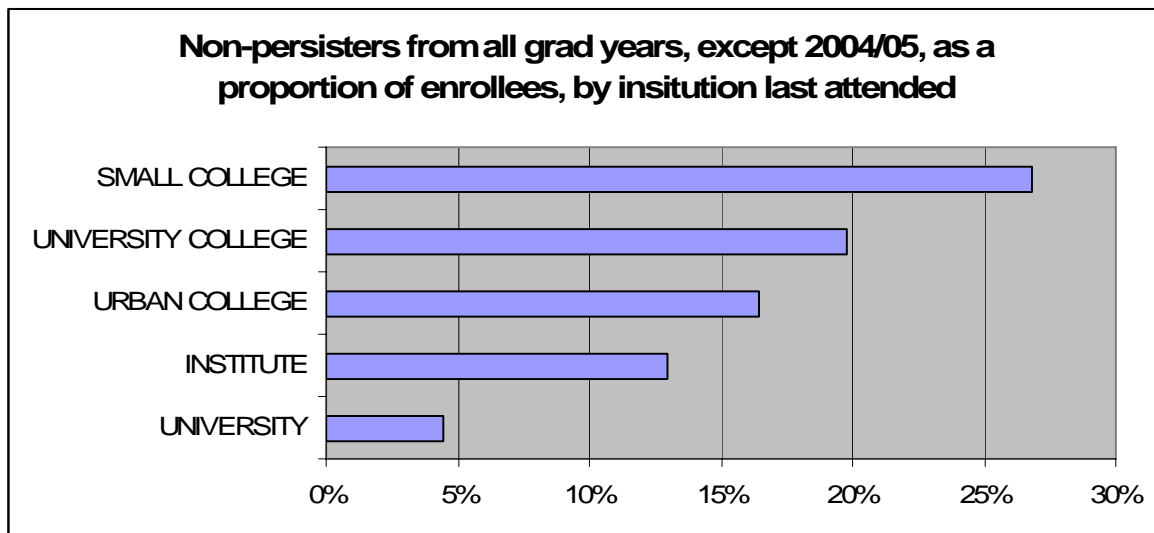
**Non-persisters: no credential completed**

These students did not complete a credential, left and did not return in the study period. They are not necessarily ‘drop outs’ because their purpose in attending a post-secondary institution might not have been to earn a credential or they might intend to return at a later date to complete a credential. Alternatively, they might have left the system, choosing to transfer to a private institution or one located outside B.C.

Figures 30 and 31 show the proportion of non-persisters by institution type and by individual institution for all years in the study, except for those who graduated in 2004/05 or entered post-secondary institutions in 2005/06. Wide differences are apparent, but there is nothing to indicate underlying reasons. It is possible that many students, who fulfilled their self-defined educational goals, but completed no credentials and hence appear as non-persisters, nevertheless had successful and rewarding post-secondary educational experiences.

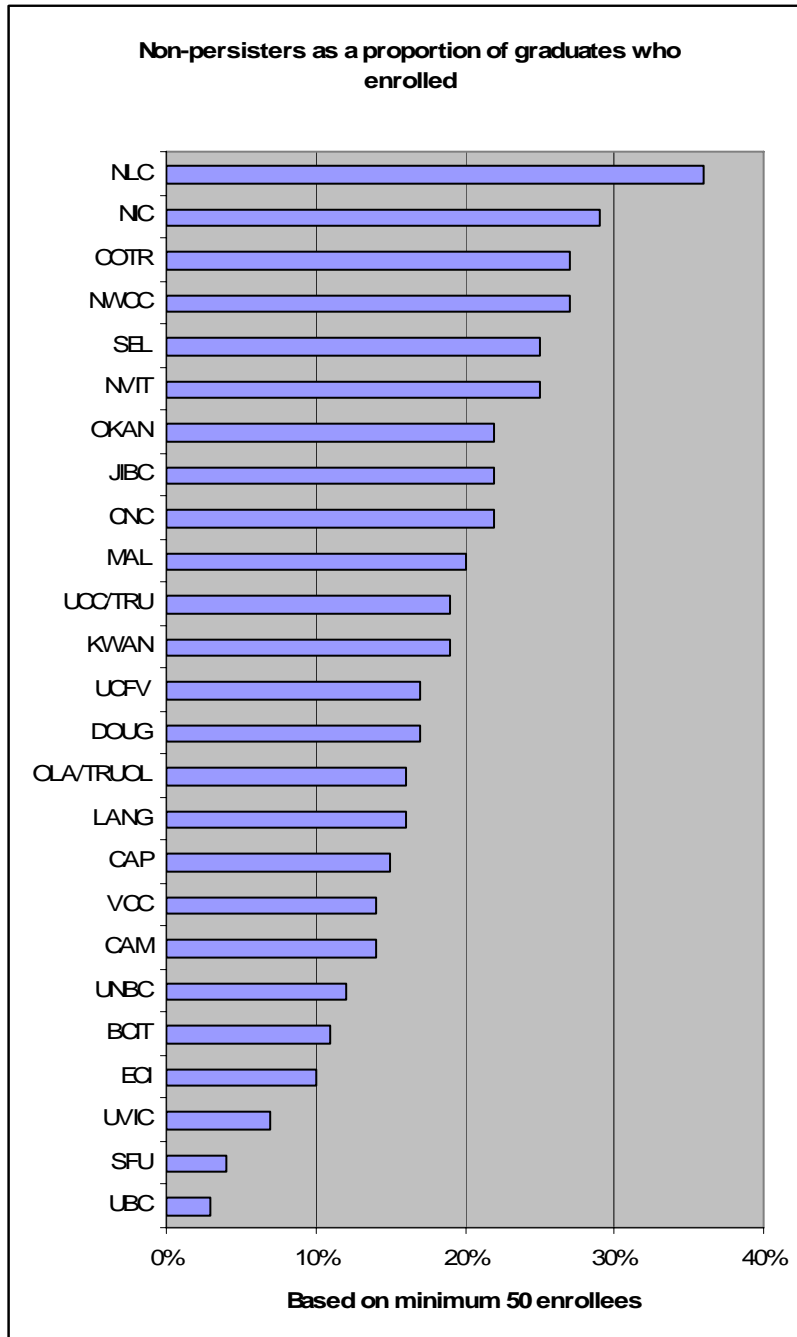
**Fig. 30: Non-persisters by institution type (no credential completed)**

(Excludes 2004/05 graduates who made post-secondary transitions and any graduate who completed a post-secondary credential).



**Fig. 31: Non-persisters by institution**

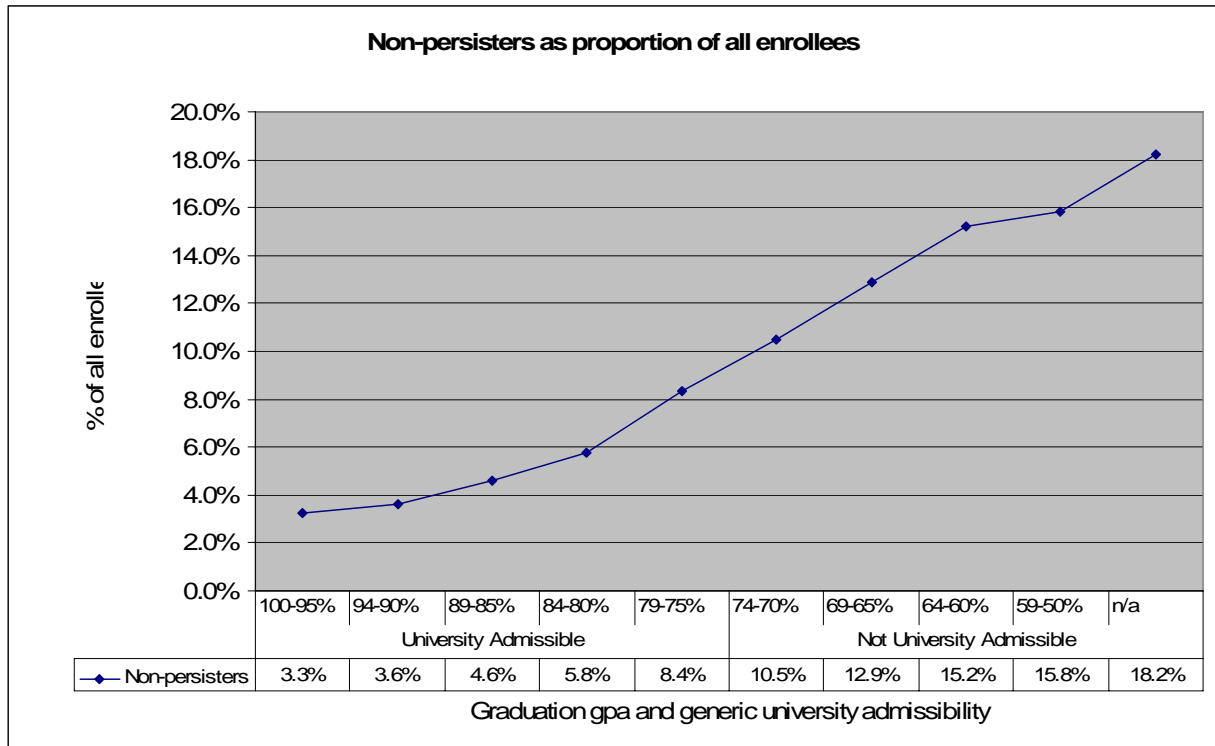
(Excludes 2004/05 graduates who made post-secondary transitions and any graduate who completed a post-secondary credential).



While there might be several factors causing such a wide disparity in the incidence of non-persistence by institution type and institution, as shown in Figure 31 (e.g. socio-economic reasons), non-persistence can be negatively correlated with secondary school graduation average and university

admissibility, regardless of the type of institution attended, as shown in Figure 32.

**Fig. 32: B.C. public post-secondary non-persisters as a proportion of all enrollees**



### **Multiple enrollments**

Some students enroll in more than one post-secondary institution in the course of an academic year. The related question that is of most interest is whether this involves simultaneous attendance at more than one post-secondary institution, but this is difficult to determine from the available data. Institutions have not defined the instructional periods for each student but have given an enrollment date using various protocols. One institution might provide the actual registration or contractual date for a semester or term, such as 17 April for a Fall term, whereas another institution might provide a date within the Fall term when enrolment is deemed to be stable, e.g. 1 November. Further, the end of the registered period is not provided, so it might be as short as a few weeks or as long as an entire academic year. Nevertheless, it is possible to examine a specific academic year and determine how many students attended more than one institution within that year, although not necessarily at the same time.

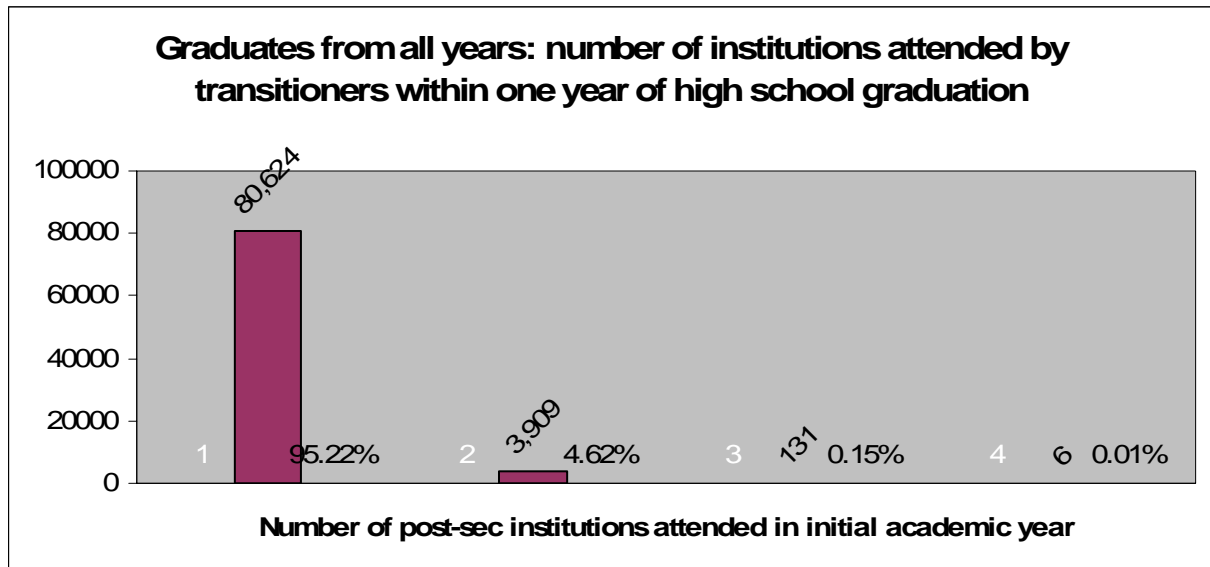
21,217 (or 52% of the 41,175 secondary school graduates of 2001/02) made an immediate transition to a post-secondary institution in 2002/03. The vast majority of these attended only one institution in that year. The remainder attended more than one, but not in large numbers.

Number of institutions attended Yr 1	2001/02 Graduates	Proportion of graduates who transitioned to post-secondary
1	20,217	95%
2	968	2%
3	31	0.1%
4	1	0.0%

Looking at the student's second year of study, for all graduation years, a similar pattern is evident:

Number of institutions attended Yr 2	All Graduates	Proportion of graduates who transitioned to post-secondary
1	60,196	93%
2	4,207	7%
3	219	0.3%
4	8	0.0%

**Fig. 33: Proportion of multiple post-secondary enrollments by new students from the graduation cohorts 2001/02 to 2004/05.**



### Possible reasons for multiple enrolments

Of those 2001/02 grads who attended more than one institution in their first transition year, the most popular combination was UBC and SFU (56 instances of which 50 were dual-registered in fall term). It is likely that these were unintended dual registrations.

The most frequent incidence of 2001/02 graduates attending 2 institutions in their second year occurs between BCIT and UBC – 255 instances. Many of these students were in a UBC professional program in winter term and moved to a BCIT ‘Other’ program later in that academic year (typically in May of the same academic year). These students appear to have been attending the two institutions sequentially, rather than simultaneously, and were likely in a jointly-offered program at the two institutions.

Students with four or more enrollments at different post-secondary institutions within an academic year were examined more closely. One student had attended five institutions in one year. The students were from various regions and were almost all in continuous attendance. Their numbers were insignificant.

The data suggest some reasons for multiple enrollments:

Non-simultaneous attendance

- mid-year transfers between institutions

Simultaneous attendance

- supplementation of program, e.g. with a distance education offering
- registration error or unintended enrollment
- joint program requiring dual registration

Relatively few students took courses at TRU – Open Learning (previously Open Learning agency) in addition to taking courses at another institution, but the creation of the institution occurred near the end of the period under study. The number of students who take courses simultaneously from more than one institution may change in future if the recent initiatives of B.C. Campus are successful.

If restricted course supply is believed to be a reason for students to enroll simultaneously at multiple institutions, there is no clear evidence in the data to support this view.

Overall, there is little to suggest that simultaneous attendance is a significant factor in the overall pattern of post-secondary attendance.

## **Student retention and movement**

### **Choice of analytical methods**

Because some students attended more than one institution in an academic year (see above), a difficulty arises in annually assigning each student to a specific institution, giving rise to the following choices:

- 1 Determine the primary institution from the student's course load and assign the student to the institution that provided the most units of instruction
- 2 Assume that each institution attended has equal weight and split the student's attendance between those institutions as a fraction of a whole enrollment
- 3 Disregard those students who have multiple attendance in any academic year.
- 4 Assign the student arbitrarily to one institution among multiple possible institutions using a simple criterion.

Method 1 could not be supported from the data. Method 2 has been used in the earlier sections of this study to show overall patterns, but is unsuitable for measuring flows because it does not treat the individual as a whole. Both Method 3 and Method 4 have also been used. Note that with Method 4, where a multiple enrollment exists in a particular year, the institution selected is the one bearing the institution code that has the lowest alphabetic order. Hence a student who has attended Douglas College and Thompson Rivers University – Open Learning will be assigned to the latter, because TRU-OL is lower in the alphabet than DOUG. This introduces some unintended bias in favour of some institutions, such as Vancouver Community College and universities starting with “U”. Use of any other simple criterion leads one into the same dilemma. Method 4 data should therefore be treated with caution.

### **Method 3 analysis**

Analyzing the records of only those students who attended a single institution or less in each year (to avoid bias that might arise from an arbitrary selection of the ‘primary’ institution, if a student attended more than one – see above), some notion of flows can be determined. The patterns are complex. This method has been used in the analyses that follow on pages 41 – 44.

### **Movement across institution types**

Each year, a proportion of the previous year's enrollees from a specific secondary school graduation cohort will re-enroll. The movements between types of institutions are given in the following matrices, as a proportion of the previous year's enrollment from the same cohort.

### **First to second year post-secondary**

There were few changes in the pattern of first year completers between 2002 and 2005. Re-designation of some post-secondary institutions affected these proportions (e.g. a student might have stayed at the same institution, but that institution changed from a university college to a university). The shaded boxes are essentially year-to-year retention rates for each institution type. Rates for the universities are consistently high. Small colleges consistently retain the smallest proportion of their first year enrollees from a particular graduating cohort and more than 40% of their previous year's students will not enroll anywhere in the following year. The movement of substantial numbers of university college students to the universities from the graduation cohort 2004/05 is mostly a result of the re-designation of UCC and the creation of UBCO.

Some students completed credentials during the study period. Subsequently they might not have continued to enroll. Therefore, in this analysis, a student who does not persist is not the same as a non-persister in the earlier analysis (see pages 34 to 36).

The prevailing pattern is that students remain enrolled at the institution attended in the first year. There are some 'reverse' or unanticipated flows from universities, notably SFU, to local colleges and university colleges. The reverse flow can exceed the normal transfer flow from the colleges and university colleges to the university. It is possibly a result of SFU students who do not meet the academic average required to continue and who are obliged to show improved performance at another institution before they may be re-admitted. Regional flows appear to be important for all institutions.

2001/02 graduates who made an immediate transition tended to remain at the same institution in succeeding years, but of those who transferred out after a year, much depended on the institution they first attended and its type. An example is given for each chief institution type - university, university college, urban college, small college and institute.

Some examples are offered for various institution types:

- 5% of UBC's (University of British Columbia - a university) entering class from B.C. secondary school attended elsewhere the following year, mostly at local colleges and university colleges. Some of these students might have been required to discontinue their programs at UBC - their reasons for transferring out are not known.
- At MAL, (Malaspina University-College - a university college) 10% of the 2001/02 graduates who entered directly had transferred out by second year to a broad variety of post-secondary institutions, with some preference for those located on Vancouver Island.

- For CAM, (Camosun College - an urban college) 8% of the 2001/02 graduates who entered directly had transferred out by second year to a broad variety of institutions, again with some preference for those on Vancouver Island.
- Graduates of the same cohort who entered SEL (Selkirk College - a small college) transferred out at a rate of 14% after first year, to various institutions, with a strong preference for UVIC among universities (none attended SFU).
- 11% of the 2001/02 graduates who entered BCIT (British Columbia Institute of Technology - an institute) moved to another institution for their second year.

**Fig. 34: Year 1 to Year 2 persistence rates by type of institution for three successive graduation cohorts**

2001/02 Grads	Enrolled D1 (Yr 2 after HS graduation)						
Enrolled I (Yr 1)	INSTITUTE	SMALL COLLEGE	URBAN COLLEGE	UNIVERSITY COLLEGE	UNIVERSITY	NOT ENROLLED	TOTAL
INSTITUTE	64%	1%	6%	3%	2%	25%	100%
SMALL COLLEGE	1%	46%	4%	3%	5%	40%	100%
URBAN COLLEGE	3%	0%	67%	2%	4%	23%	100%
UNIVERSITY COLLEGE	3%	0%	4%	63%	3%	28%	100%
UNIVERSITY	1%	0%	3%	1%	89%	6%	100%

2002/03 Grads	Enrolled D1 (Yr 2 after HS graduation)						
Enrolled I (Yr 1)	INSTITUTE	SMALL COLLEGE	URBAN COLLEGE	UNIVERSITY COLLEGE	UNIVERSITY	NOT ENROLLED	TOTAL
INSTITUTE	63%	0%	5%	2%	1%	28%	100%
SMALL COLLEGE	2%	44%	4%	3%	4%	43%	100%
URBAN COLLEGE	3%	0%	68%	2%	5%	22%	100%
UNIVERSITY COLLEGE	2%	0%	4%	64%	3%	26%	100%
UNIVERSITY	1%	0%	3%	1%	89%	5%	100%

2003/04 Grads	Enrolled D1 (Yr 2 after HS graduation)						
Enrolled I (Yr 1)	INSTITUTE	SMALL COLLEGE	URBAN COLLEGE	UNIVERSITY COLLEGE	UNIVERSITY	NOT ENROLLED	TOTAL
INSTITUTE	62%	0%	6%	2%	6%	24%	100%
SMALL COLLEGE	1%	48%	3%	2%	6%	41%	100%
URBAN COLLEGE	2%	0%	61%	2%	12%	22%	100%
UNIVERSITY COLLEGE	2%	0%	3%	52%	17%	26%	100%
UNIVERSITY	1%	0%	3%	1%	89%	6%	100%

**Second to third year post-secondary**

A substantial portion of second year students at urban colleges and university colleges migrate to universities in their third year after graduation, presumably a reflection of B.C.'s well-developed transfer system which allows students to begin a bachelor's degree program at one institution and complete it at another. (Note the re-designation of some institutions affects these numbers.)

Predominantly, students remain enrolled at the institution attended in their second year. Large scale transfers occur from colleges of all types to

universities and university colleges. 'Reverse' flows from universities, seen in the Year 1 to Year 2 detailed movements, are less significant.

Regional flows continue to be important for all institutions. Large flows continue from several institutions to BCIT and are notable because BCIT has relatively few transfer agreements with other institutions, yet is a major destination for numerous students elsewhere in the post-secondary system.

**Fig. 35: Year 2 to Year 3 persistence rates by type of institution for two successive graduation cohorts**

2001/02 Grads	Enrolled D2 (Yr 3 after HS graduation)						
Enrolled D1 (Yr 2)	INSTITUTE	SMALL COLLEGE	URBAN COLLEGE	UNIVERSITY COLLEGE	UNIVERSITY	NOT ENROLLED	TOTAL
INSTITUTE	56%	1%	5%	4%	2%	32%	100%
SMALL COLLEGE	2%	39%	4%	3%	5%	46%	100%
URBAN COLLEGE	4%	0%	57%	2%	10%	27%	100%
UNIVERSITY COLLEGE	3%	1%	4%	58%	6%	28%	100%
UNIVERSITY	1%	0%	2%	1%	89%	6%	100%

2002/03 Grads	Enrolled D2 (Yr 3 after HS graduation)						
Enrolled D1 (Yr 2)	INSTITUTE	SMALL COLLEGE	URBAN COLLEGE	UNIVERSITY COLLEGE	UNIVERSITY	NOT ENROLLED	TOTAL
INSTITUTE	51%	1%	4%	2%	9%	33%	100%
SMALL COLLEGE	1%	41%	4%	2%	7%	46%	100%
URBAN COLLEGE	3%	1%	50%	2%	19%	26%	100%
UNIVERSITY COLLEGE	2%	0%	3%	48%	19%	27%	100%
UNIVERSITY	1%	0%	2%	1%	90%	6%	100%

**Third to fourth year post-secondary**

As expected, university retention rates increased and remained substantially higher than those of other institution types.

**Fig. 36 Third to fourth year persistence rates by type of institution for the 2001/02 graduation cohort**

2001/02 Grads	Enrolled D3 (Yr 4 after HS graduation)						
Enrolled D2 (Yr 3)	INSTITUTE	SMALL COLLEGE	URBAN COLLEGE	UNIVERSITY COLLEGE	UNIVERSITY	NOT ENROLLED	TOTAL
INSTITUTE	47%	1%	5%	2%	11%	34%	100%
SMALL COLLEGE	1%	37%	3%	3%	8%	47%	100%
URBAN COLLEGE	3%	1%	49%	2%	19%	28%	100%
UNIVERSITY COLLEGE	2%	1%	3%	47%	21%	27%	100%
UNIVERSITY	0%	0%	1%	1%	93%	5%	100%

**Method 4 analysis**

As discussed above, this method considers all transitioned students but might not correctly assign those with multiple enrollments within a year to the correct institution. However, as shown earlier, this affects fewer than 8% of students in any year. This method is used in the analyses given on pages 45 to 58.

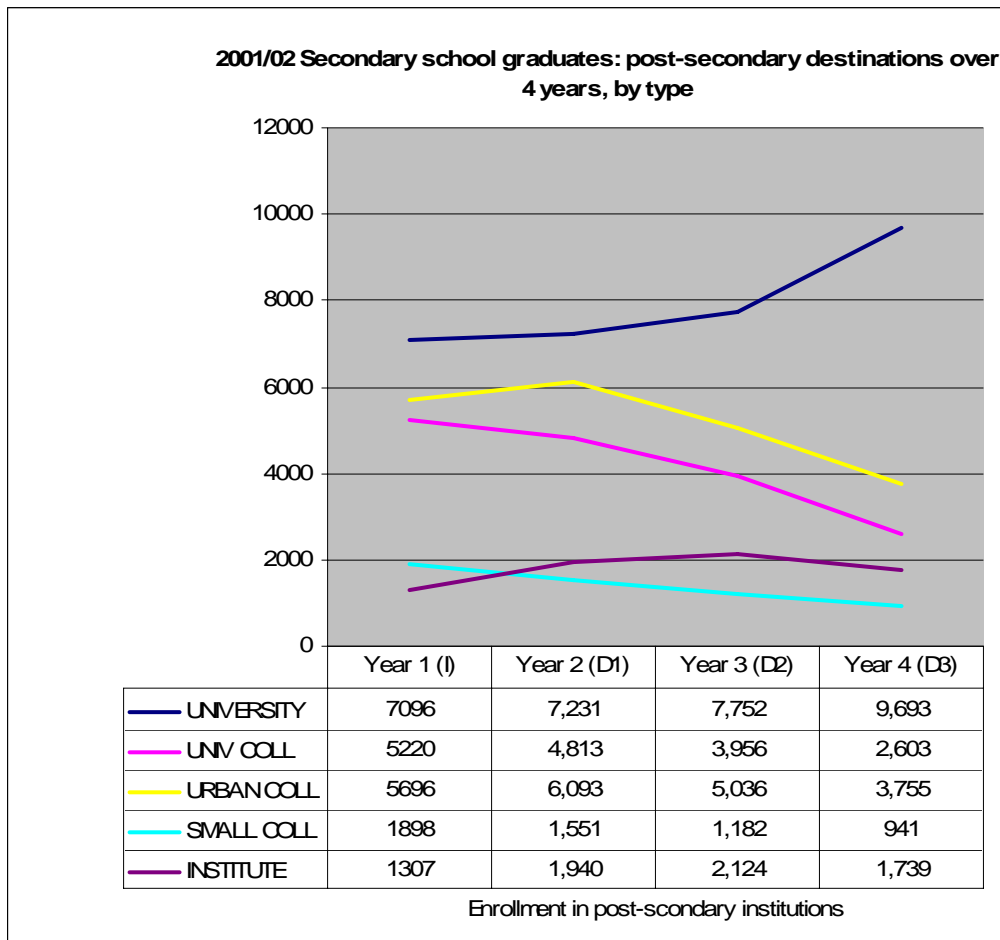
**Patterns of movement**

The aggregate pattern of attendance can be depicted by the following matrix. There is an expected migration of students from 2 year to 4 year institutions, but not all institutions fit this categorization.

**Fig. 37: Dispersal of the 2001/02 graduating cohort by institution type and year**

Secondary school graduation cohort 2001/02 Enrolled at	Year 1 (I)	Year 2 (D1)	Year 3 (D2)	Year 4 (D3)
UNIVERSITY	7,096	7,231	7,752	9,693
UNIVERSITY COLLEGE	5,220	4,813	3,956	2,603
URBAN COLLEGE	5,696	6,093	5,036	3,755
SMALL COLLEGE	1,898	1,551	1,182	941
INSTITUTE	1,307	1,940	2,124	1,739
Not Enrolled	19,958	19,547	21,125	22,444
Total	41,175	41,175	41,175	41,175

**Fig. 38: Institution type attended by 2001/02 graduating cohort**



More detailed views of these movements are shown in the large matrices below. These views are in many ways of more interest than aggregate views, particularly as institution types are less clearly defined than they once were.

**First to second year post-secondary**

**Fig. 39A: Year 1 to Year 2 movement between institutions by 2001/02 graduates**

		Attended Yr 2 at														
Attended Yr 1 at	RRU	SFU	UBC	UNBC	UVIC	KWAN	MAL	UCC	UCFV	CAM	CAP	DOUG	LANG	OKAN	VCC	
SFU	0	1751	16	<5	<5	36	<5	<5	5	<5	22	47	37	<5	5	
UBC	0	15	3183	<5	<5	19	<5	<5	7	<5	11	8	39	<5	15	
UNBC	0	<5	5	237	<5	<5	<5	6	<5	6	<5	5	<5	<5	0	
UVIC	0	7	6	<5	1033	<5	<5	<5	<5	15	<5	0	<5	0	<5	
KWAN	0	31	29	<5	12	1342	<5	<5	17	0	<5	63	57	<5	23	
MAL	0	<5	5	<5	11	<5	499	<5	<5	17	0	<5	<5	<5	<5	
UCC	0	<5	17	<5	6	6	<5	603	0	<5	5	<5	<5	11	0	
UCFV	0	<5	15	<5	<5	14	<5	<5	743	<5	<5	9	<5	<5	<5	
CAM	0	0	0	<5	29	<5	5	0	0	487	<5	0	0	0	0	
CAP	0	21	18	<5	7	<5	<5	<5	<5	<5	597	16	15	<5	16	
DOUG	0	29	6	<5	<5	14	<5	<5	6	0	7	853	16	<5	16	
LANG	0	22	60	<5	<5	30	0	0	<5	<5	11	31	833	0	43	
OKAN	0	<5	15	<5	10	<5	<5	11	<5	<5	5	<5	<5	538	0	
VCC	0	<5	<5	0	0	6	0	<5	<5	0	6	13	22	<5	265	
CNC	0	0	5	14	<5	<5	0	<5	<5	<5	0	<5	0	8	0	
COTR	0	0	<5	<5	<5	0	<5	<5	<5	0	0	0	0	<5	0	
SEL	0	0	6	<5	12	0	0	<5	<5	6	0	0	<5	12	<5	
NIC	0	<5	<5	<5	11	0	29	<5	0	16	<5	<5	0	<5	<5	
NLC	0	<5	0	5	<5	0	<5	<5	0	<5	<5	0	<5	5	0	
NWCC	0	0	6	16	45	<5	<5	<5	<5	<5	<5	<5	0	8	0	
SEL	0	0	6	<5	12	0	0	<5	<5	6	0	0	<5	12	<5	
BCIT	0	<5	<5	<5	<5	14	<5	<5	<5	<5	6	16	10	7	9	
ECI	0	<5	0	0	0	<5	0	0	0	0	<5	0	<5	0	0	
IIG	0	0	0	0	0	0	0	0	0	0	0	0	<5	0	0	
JIBC	0	0	0	<5	0	<5	0	0	0	0	<5	<5	0	<5	0	
NVIT	0	0	0	0	0	0	0	<5	0	0	0	0	0	0	0	
OLA	0	5	13	<5	6	6	<5	5	<5	<5	0	<5	5	<5	<5	
Not attending	<5	92	148	33	163	469	299	235	270	403	224	325	233	333	161	
Total	<5	1997	3563	338	1332	1975	860	903	1075	980	914	1401	1285	946	567	

Fig. 39B: Year 1 to Year 2 movement between institutions by 2001/02 graduates

Attended Yr 1 at	Attended Yr 2 at													Total
	CNC	COTR	NIC	NLC	NWCC	SEL	BCIT	ECI	IIG	JIBC	NVIT	OLA	Not attending	
SFU	<5	0	0	0	<5	<5	20	0	0	<5	0	12	114	2084
UBC	0	0	<5	0	0	<5	15	0	0	0	0	12	129	3471
UNBC	21	0	0	<5	<5	<5	<5	0	0	0	0	<5	58	363
UVIC	0	<5	<5	0	<5	<5	<5	<5	0	0	0	6	89	1178
KWAN	<5	<5	<5	<5	0	0	84	<5	0	6	0	16	571	2273
MAL	<5	<5	5	<5	0	<5	<5	0	0	<5	0	10	231	811
UCC	<5	0	0	<5	<5	5	<5	<5	0	<5	<5	5	317	1004
UCFV	0	0	0	0	0	<5	18	0	0	<5	0	<5	301	1132
CAM	<5	0	<5	<5	0	0	<5	0	0	<5	0	5	162	703
CAP	0	<5	0	0	0	0	22	6	0	<5	0	15	182	935
DOUG	<5	0	0	0	0	<5	49	0	0	<5	0	12	245	1266
LANG	0	0	<5	<5	0	0	51	<5	0	<5	0	17	240	1356
OKAN	<5	<5	<5	<5	0	<5	5	<5	0	<5	0	9	327	955
VCC	0	0	0	0	0	0	15	<5	0	<5	0	<5	140	481
CNC	239	0	0	<5	<5	0	<5	0	0	<5	0	<5	179	468
COTR	<5	106	0	<5	0	0	<5	0	0	<5	0	<5	133	257
NIC	1	0	188	0	0	0	7	0	0	<5	0	<5	163	434
NLC	5	<5	0	85	0	<5	<5	<5	0	0	0	<5	76	196
NWCC	<5	0	0	0	54	0	0	0	0	0	0	<5	61	171
SEL	0	5	0	0	0	179	0	0	0	0	0	0	142	372
BCIT	<5	<5	<5	<5	<5	<5	603	<5	0	7	0	<5	231	935
ECI	0	0	0	0	0	0	<5	57	0	0	0	0	15	83
IIG	0	0	0	0	0	0	0	0	<5	0	0	0	0	<5
JIBC	0	<5	0	0	0	0	<5	0	0	22	0	0	22	56
NVIT	0	0	0	0	0	0	0	0	0	0	5	0	<5	8
OLA	<5	<5	<5	0	<5	0	<5	<5	0	0	0	121	37	223
Not attending	123	107	125	67	42	100	467	24	<5	54	<5	74	15361	19958
Total	411	233	334	163	110	300	1379	106	<5	110	12	331	19547	41175

Second to third year post-secondary

Fig. 40A: Year 2 to Year 3 movement between institutions by 2001/02 graduates

		Attended Yr 3 at														
Attended Yr 2 at	RRU	SFU	UBC	UNBC	UVIC	KWAN	MAL	UCC	UCFV	CAM	CAP	DOUG	LANG	OKAN	VCC	
RRU	0	0	0	0	0	0	0	<5	0	0	0	0	0	0	0	
SFU	0	1755	18	0	<5	19	<5	<5	0	0	8	33	13	<5	6	
UBC	0	16	3241	<5	7	26	<5	6	<5	0	<5	9	43	<5	13	
UNBC	0	<5	6	230	6	<5	<5	5	<5	<5	<5	<5	<5	0	0	
UVIC	<5	6	20	0	1125	<5	9	<5	<5	17	0	<5	<5	<5	<5	
KWAN	0	146	66	<5	5	992	<5	<5	20	<5	8	64	43	<5	28	
MAL	0	<5	8	<5	17	<5	473	<5	<5	14	<5	<5	5	<5	<5	
UCC	0	<5	10	<5	5	<5	0	572	<5	<5	<5	<5	<5	8	<5	
UCFV	0	16	10	<5	<5	7	<5	<5	699	<5	<5	<5	6	5	<5	
CAM	<5	5	<5	<5	68	<5	16	<5	<5	567	<5	<5	<5	<5	0	
CAP	0	79	58	<5	6	9	<5	<5	<5	<5	441	7	19	<5	13	
DOUG	0	108	27	<5	5	26	<5	<5	13	<5	8	799	7	<5	19	
LANG	0	112	99	5	8	40	<5	<5	<5	<5	9	20	631	<5	28	
OKAN	0	<5	12	0	11	6	<5	5	<5	6	0	<5	<5	547	0	
VCC	0	8	8	<5	<5	5	0	0	0	<5	<5	19	20	<5	253	
CNC	<5	<5	<5	42	<5	<5	<5	<5	<5	5	<5	<5	<5	<5	0	
COTR	0	<5	0	0	8	<5	<5	<5	<5	0	<5	<5	0	<5	0	
NIC	<5	0	0	0	<5	0	24	<5	<5	11	<5	0	0	<5	<5	
NLC	0	0	0	<5	0	0	0	0	0	<5	<5	0	0	<5	0	
NWCC	0	<5	<5	<5	<5	0	<5	0	0	<5	<5	<5	<5	<5	0	
SEL	0	<5	7	<5	6	0	0	5	<5	<5	<5	<5	<5	10	0	
BCIT	<5	7	0	0	<5	16	5	<5	11	<5	9	24	13	<5	13	
ECI	0	0	<5	<5	0	<5	0	0	<5	0	<5	0	<5	0	0	
IIG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JIBC	0	<5	0	0	0	<5	<5	<5	<5	<5	<5	<5	0	<5	<5	
NVIT	0	0	0	0	0	0	0	<5	0	0	0	<5	0	0	0	
OLA	0	22	5	<5	12	11	9	5	<5	6	8	<5	8	5	<5	
Not attending	0	47	93	20	70	258	171	192	198	243	114	164	172	234	125	
Total	5	2351	3699	322	1375	1431	730	825	970	896	633	1167	994	840	506	

**Fig. 40B: Year 2 to Year 3 movement between institutions by 2001/02 graduates (continued)**

Attended Yr 3 at														
Attended Yr 2 at	CNC	COTR	NIC	NLC	NWCC	SEL	BCIT	ECI	IIG	JIBC	NVIT	OLA	Not attending	Total
RRU	0	0	0	0	0	0	0	0	0	0	0	0	<5	<5
SFU	0	0	<5	0	<5	<5	26	0	0	0	0	10	99	1997
UBC	0	0	0	0	0	0	26	0	0	0	0	25	137	3563
UNBC	15	<5	0	0	<5	0	<5	0	0	0	0	<5	51	338
UVIC	0	<5	<5	0	<5	0	7	0	0	0	0	<5	126	1332
KWAN	<5	<5	0	0	0	<5	66	<5	0	7	0	13	500	1975
MAL	<5	<5	10	<5	<5	0	7	0	0	<5	0	7	289	860
UCC	<5	<5	0	<5	<5	<5	7	0	0	0	0	<5	269	903
UCFV	<5	1	0	0	0	0	17	0	0	10	0	5	282	1075
CAM	0	0	5	0	<5	<5	5	0	0	<5	0	10	279	980
CAP	0	0	0	<5	<5	0	29	<5	0	6	0	6	227	914
DOUG	<5	0	0	0	<5	0	52	<5	0	<5	0	12	310	1401
LANG	0	<5	0	0	0	<5	43	8	0	<5	0	15	251	1285
OKAN	<5	0	<5	0	0	6	<5	0	0	<5	<5	9	325	946
VCC	0	0	0	0	0	<5	19	0	0	0	0	<5	223	567
CNC	142	<5	0	6	<5	<5	5	<5	0	<5	0	<5	172	411
COTR	0	79	<5	<5	0	<5	<5	0	0	<5	0	<5	123	233
NIC	0	<5	128	0	0	0	5	0	0	<5	0	0	151	334
NLC	<5	0	0	55	0	0	<5	0	0	0	0	<5	96	163
NWCC	5	0	<5	0	41	0	<5	0	0	0	0	<5	44	110
SEL	<5	<5	0	<5	0	122	6	0	0	<5	0	<5	122	300
BCIT	0	<5	0	<5	<5	0	776	0	0	6	0	10	475	1379
ECI	0	0	0	0	0	0	<5	73	0	0	0	<5	17	106
IIG	0	0	0	0	0	0	0	0	<5	0	0	0	0	<5
JIBC	<5	<5	<5	0	0	0	15	0	0	37	0	<5	37	110
NVIT	0	0	0	0	0	0	0	0	0	0	5	0	<5	12
OLA	<5	<5	<5	<5	<5	<5	8	<5	0	0	0	140	69	331
Not attending	111	61	81	67	51	109	374	13	0	65	<5	65	16446	19547
Total	290	160	232	139	107	254	1510	101	<5	148	9	354	21125	41175

Third to fourth year post-secondary

Fig. 41A: Year 3 to Year 4 movement between institutions by 2001/02 graduates

Attended Yr 3 at	Attended Yr 4 at																
	RRU	SFU	TRU	TRU-OL	UBC	UBCO	UNBC	UVIC	KWAN	MAL	UCFV	CAM	CAP	DOUG	LANG	OKAN	VCC
RRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SFU	<5	2133	0	23	8	<5	<5	<5	19	0	<5	<5	<5	18	6	0	9
UBC	<5	9	<5	11	3450	<5	<5	<5	8	<5	<5	<5	<5	6	33	<5	8
UNBC	0	<5	<5	<5	<5	0	264	<5	0	0	<5	<5	<5	0	0	0	0
UVIC	<5	7	<5	8	13	5	<5	1215	<5	<5	0	11	0	<5	<5	0	<5
KWAN	0	96	<5	8	53	0	<5	11	758	<5	12	<5	6	21	27	<5	17
MAL	0	<5	0	15	5	<5	0	14	0	428	0	10	<5	0	<5	<5	<5
UCC	0	<5	490	57	16	<5	<5	<5	<5	<5	0	<5	0	<5	<5	<5	<5
UCFV	0	9	<5	6	11	<5	<5	7	7	0	646	<5	<5	<5	<5	<5	0
CAM	10	<5	0	9	6	0	0	109	0	7	<5	492	<5	0	0	<5	<5
CAP	0	47	0	6	54	<5	<5	9	0	0	<5	<5	293	0	5	0	6
DOUG	<5	100	6	11	19	0	<5	<5	16	<5	25	0	10	612	8	0	18
LANG	0	68	<5	6	102	0	7	29	30	<5	<5	<5	9	8	461	0	17
OKAN	<5	0	<5	<5	6	286	<5	5	<5	0	0	<5	0	<5	1	253	0
VCC	0	6	0	<5	15	0	0	<5	7	0	<5	<5	<5	8	7	0	229
CNC	0	<5	6	<5	<5	0	29	0	<5	<5	<5	0	0	<5	0	0	<5
COTR	0	0	<5	<5	0	<5	0	<5	0	<5	<5	<5	0	0	<5	<5	0
NIC	0	0	<5	<5	<5	0	0	6	<5	21	0	6	<5	0	<5	<5	<5
NLC	0	0	<5	0	<5	0	<5	<5	0	<5	0	0	<5	0	0	0	<5
NWCC	0	<5	0	<5	0	<5	0	0	0	<5	0	<5	<5	0	0	<5	0
SEL	<5	<5	<5	7	<5	<5	<5	9	<5	0	<5	0	<5	<5	0	<5	0
BCIT	<5	5	<5	10	<5	0	<5	0	18	<5	8	<5	11	15	9	<5	9
ECI	0	0	0	0	0	0	0	0	<5	<5	0	0	0	<5	7	0	0
IIG	0	0	0	0	<5	0	0	0	0	0	0	0	0	0	0	0	0
JIBC	<5	<5	<5	0	0	0	<5	<5	0	<5	<5	<5	0	0	<5	0	<5
NVIT	0	0	<5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLA	0	10	<5	168	9	10	<5	11	6	<5	<5	10	7	5	7	<5	<5
Not attending	<5	44	131	55	71	13	21	70	204	167	158	245	107	190	126	156	132
Total	23	2555	663	415	3849	329	346	1513	1082	650	871	799	461	897	706	431	461

**Fig. 41B: Year 3 to Year 4 movement between institutions by 2001/02 graduates (continued)**

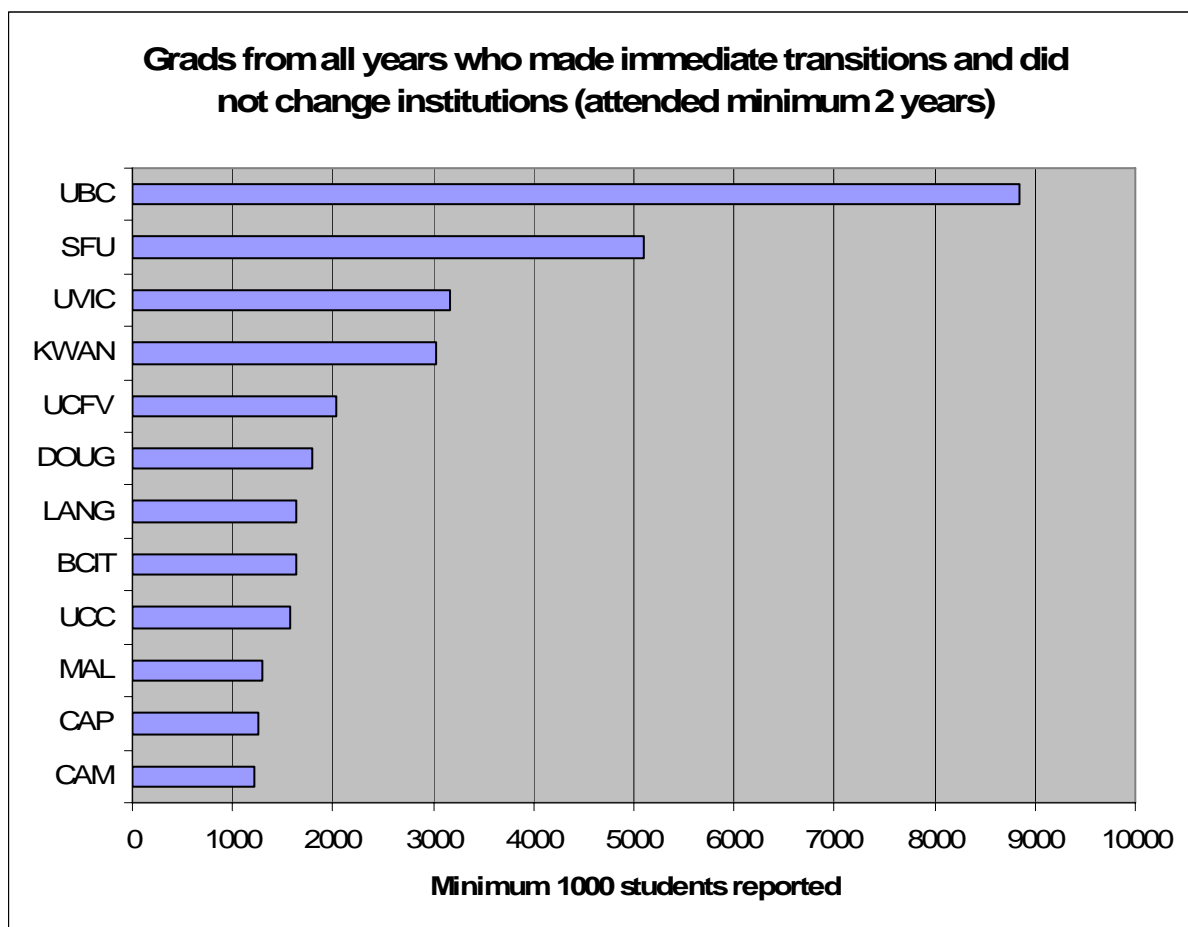
Attended Yr 3 at	Attended Yr 4 at												Total
	CNC	COTR	NIC	NLC	NWCC	SEL	BCIT	ECI	IIG	JIBC	NVIT	Not attending	
RRU	0	0	0	0	0	0	0	0	0	0	0	5	5
SFU	0	0	0	0	0	0	13	<5	0	<5	0	108	2351
UBC	0	0	0	0	0	0	13	0	0	<5	0	144	3699
UNBC	6	0	0	<5	<5	<5	<5	0	0	0	0	32	322
UVIC	<5	0	<5	0	0	<5	<5	0	0	<5	0	90	1375
KWAN	<5	0	<5	0	0	<5	49	5	0	7	0	348	1431
MAL	0	0	5	<5	0	<5	<5	0	0	6	0	232	730
UCC	<5	<5	0	<5	<5	<5	<5	<5	0	<5	<5	219	825
UCFV	0	0	0	0	0	<5	9	<5	0	<5	0	255	970
CAM	0	0	<5	<5	0	0	<5	<5	0	5	0	234	896
CAP	0	<5	<5	0	0	<5	24	<5	0	<5	0	176	633
DOUG	0	0	0	0	<5	0	27	0	0	5	0	300	1167
LANG	<5	0	0	0	0	<5	33	<5	0	<5	0	205	994
OKAN	<5	<5	0	<5	<5	<5	7	0	0	<5	0	256	840
VCC	0	0	0	0	0	0	11	0	0	<5	0	211	506
CNC	100	<5	0	<5	0	<5	<5	0	0	0	0	128	290
COTR	<5	64	<5	0	0	0	<5	0	0	<5	0	75	160
NIC	<5	0	87	0	0	0	<5	0	0	<5	0	96	232
NLC	<5	0	0	42	0	0	<5	0	0	0	0	83	139
NWCC	<5	0	0	0	34	<5	<5	0	0	<5	0	56	107
SEL	<5	<5	0	<5	0	93	<5	0	0	0	0	117	254
BCIT	<5	<5	<5	<5	0	0	821	<5	<5	16	0	562	1510
ECI	0	0	0	0	0	<5	<5	79	0	0	0	8	101
IIG	0	0	0	0	0	0	0	0	<5	0	0	0	<5
JIBC	0	<5	0	<5	<5	<5	11	0	0	43	0	72	148
NVIT	0	0	0	0	0	0	0	0	0	0	<5	<5	9
OLA	<5	<5	<5	0	<5	0	10	0	0	<5	0	83	354
Not attending	88	75	74	77	35	65	404	17	<5	46	7	18345	21125
Total	218	157	177	133	79	177	1462	116	<5	146	12	22444	41175

### Student movement between individual institutions

Students who started attending a post-secondary institution in the academic year following their secondary school graduation (immediate transitions) are compared with others starting at the same stage, but not necessarily in the same year. The same method is used for the succeeding years. Note this is not the same as a comparison of students from the same graduation cohort, because a starting year may include students who delayed their entry to the post-secondary system.

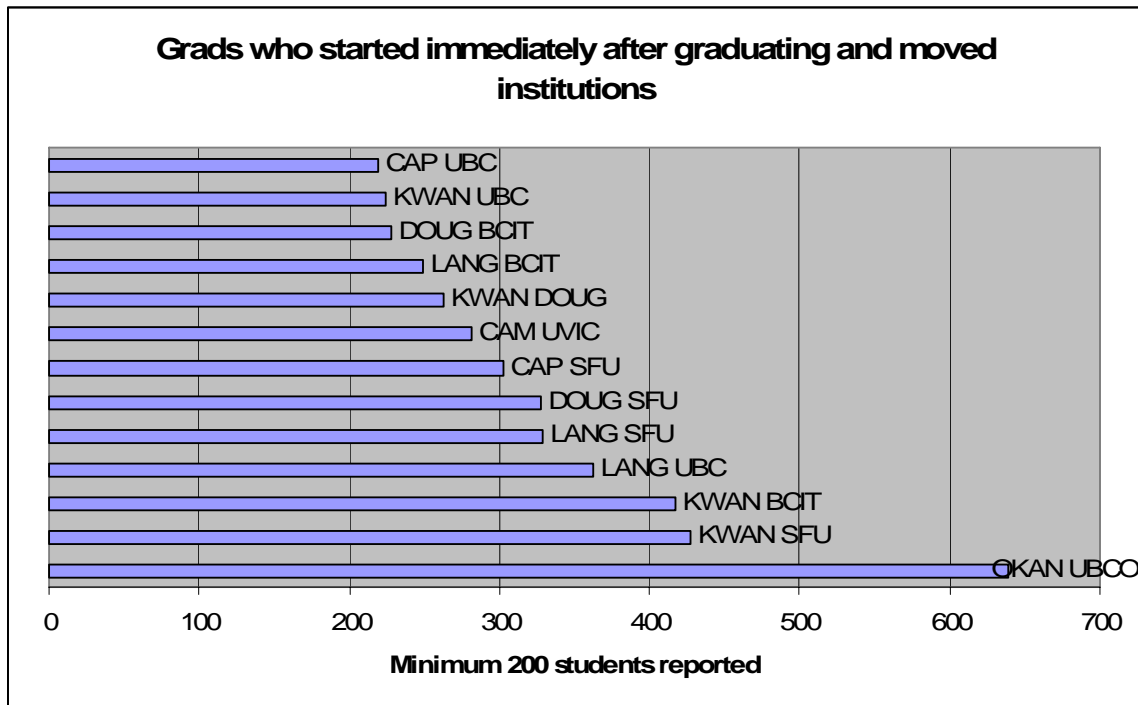
The predominant pattern is for students to remain at the first institution attended. Movement between institutions, while frequent, is far less common than is consistent attendance at one. For those who started immediately after their graduation year, the most frequent patterns are year-to-year sequential enrollments at the biggest institutions:

**Fig. 42: Graduates who started immediately, attended at least two years and did not move to another institution**



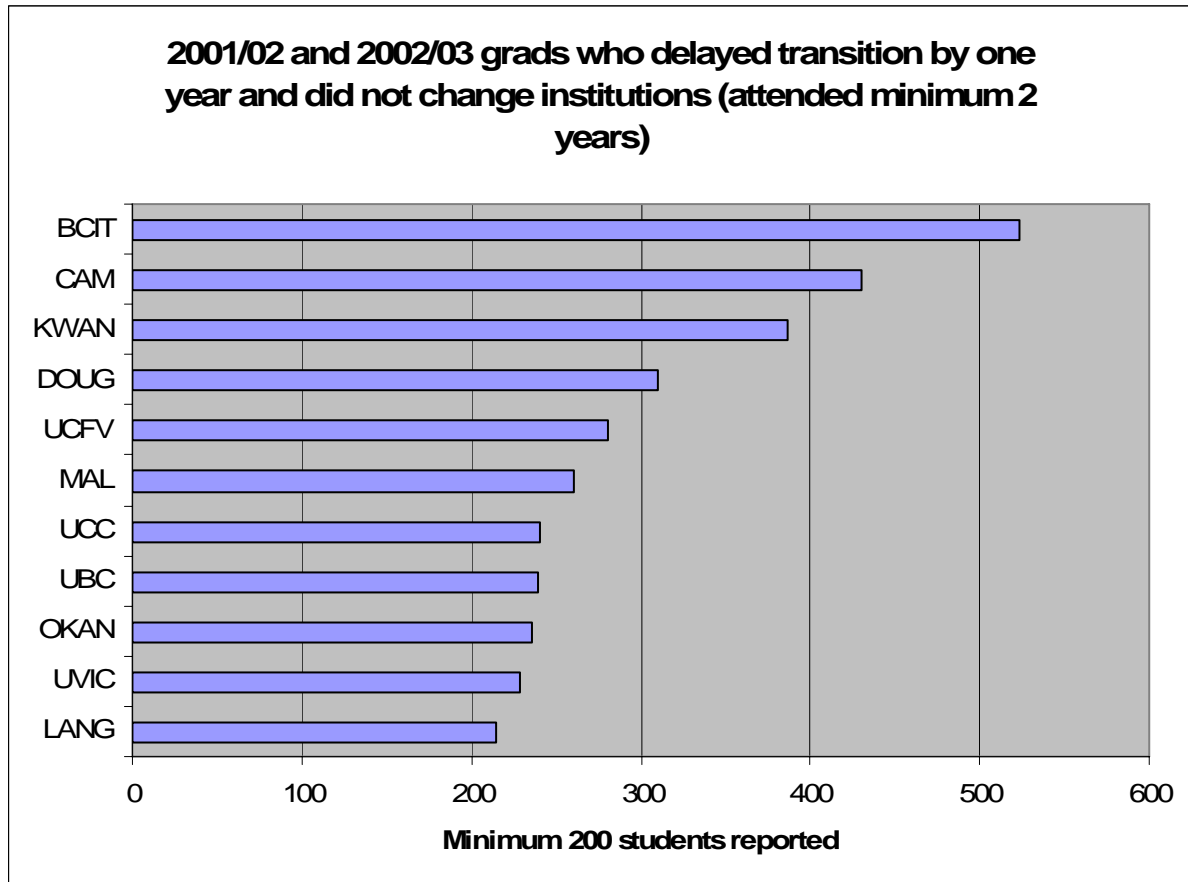
The following chart shows the most frequent patterns of movement of secondary school graduates who made an immediate transition but who changed institutions. Far fewer students move than remain at the same institution. The moves tend to be local and between urban or university colleges and universities, but notable exceptions are strong flows to BCIT from three large institutions. It is not clear whether these moves are true transfers or are an indication of completion of qualifying work, which itself might not be transferred to the new institution or credential.

**Fig. 43: Graduates who made an immediate transition to a post-secondary institution and moved between institutions**



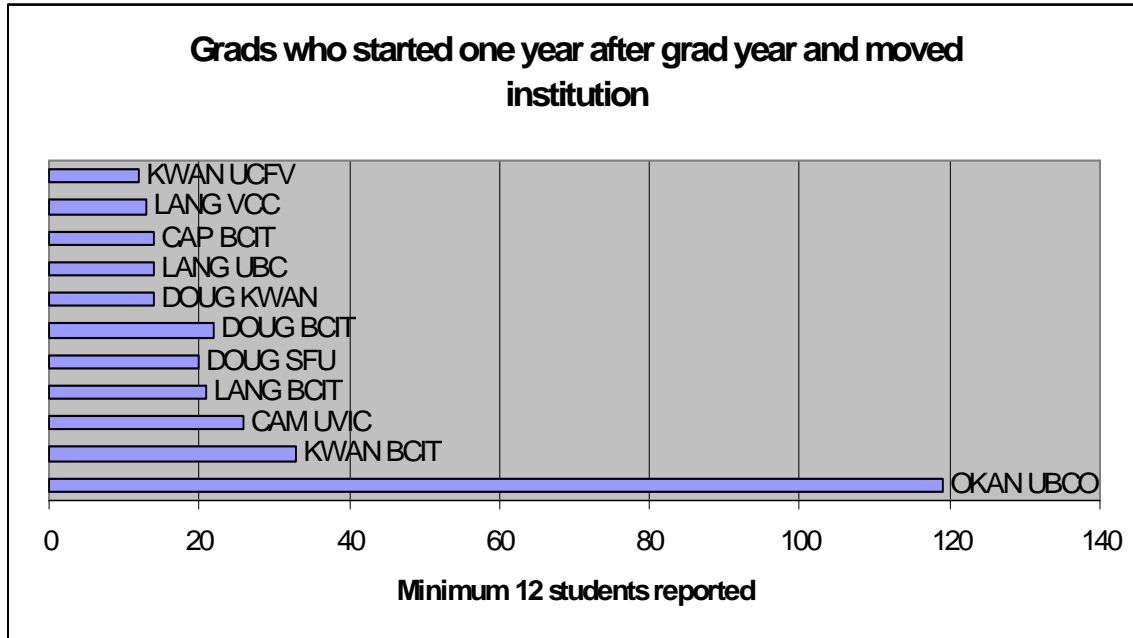
Graduates who delayed their transitions by one year showed somewhat different patterns of attendance, being less likely to attend a university and more likely to attend BCIT. These graduates are similar to those who made immediate transitions in showing little movement between institutions. Figure 44 shows students who attended two or three years and did not move to another institution.

**Fig. 44: Most common enrollment patterns for grads who delayed entry by one year**



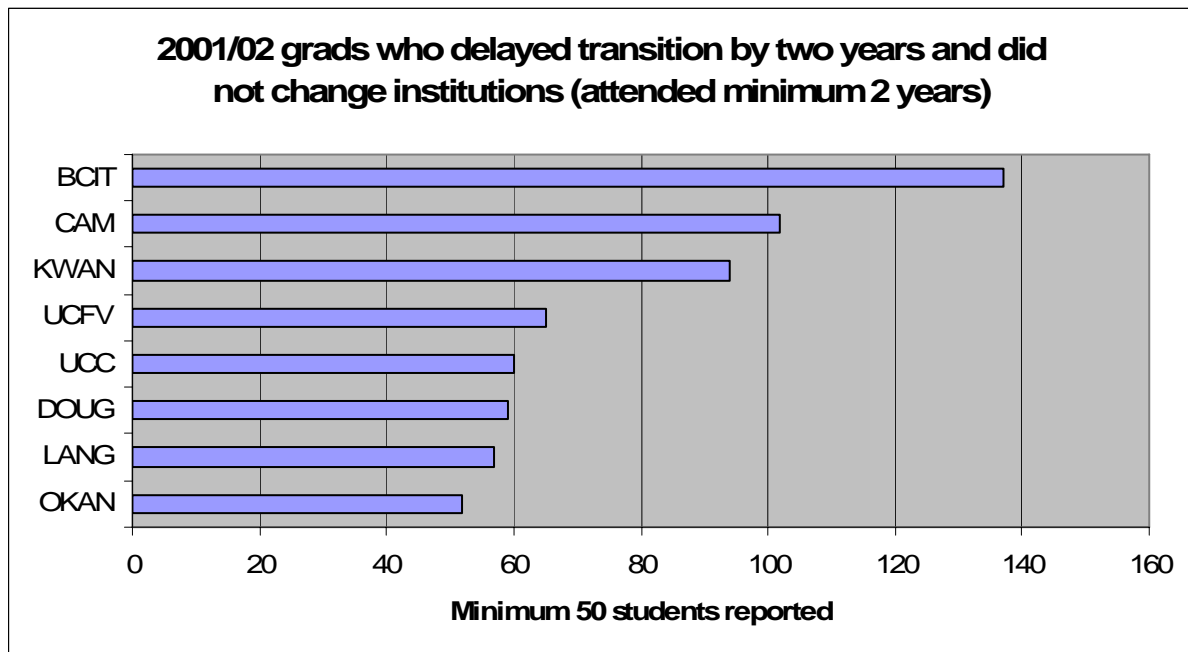
For the same population, the most frequent movement patterns between institutions are shown below.

**Fig. 45: Most common enrollment patterns for graduates who delayed entry by one year and who changed institutions**



The most frequent patterns of attendance for those who delayed starting for two years after their graduation year and attended for two years are shown below. Graduates who delayed transition for this length of time are much less likely to attend a university.

**Fig. 46: Most common enrollment patterns for graduates who delayed entry by two years**

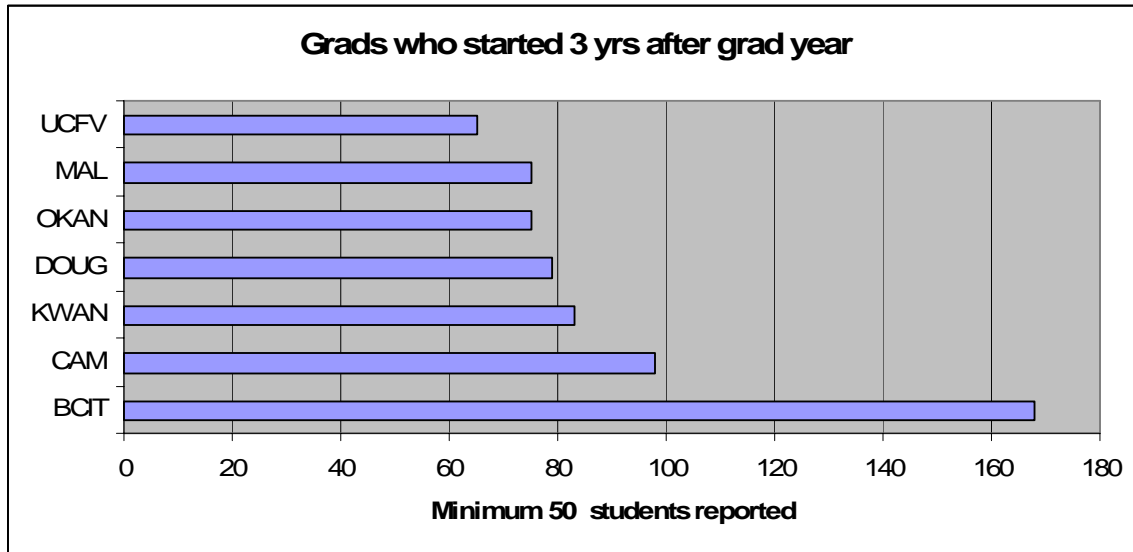


After allowing for the change of name and status of the University College of the Cariboo, there was no significant movement among institutions by these students. The maximum frequency of students who attended two different institutions (CAM and UVIC) is 6.

Subsequent post-secondary entries did not establish a year-to-year pattern because their initial year was 2005/06, the last year of the study or their initial year was not followed by any further enrollment.

The following chart shows where most of the older post-secondary starters begin, and it is clearly not at a university.

**Fig. 47: Most common enrollment patterns for graduates who delayed entry by three years**



## Conclusions

Tracking B.C.'s graduates from the secondary school system into the public post-secondary system is an ambitious but worthwhile pursuit.

This study shows that on the whole, students follow regional patterns, suggesting that location is central in students' choices. There are also wide regional variations in the actual qualifications of graduates and their rates of participation in the post-secondary system.

A secondary school graduate is more likely to enroll in a B.C. public post-secondary institution if she or he:

- attends a school in a large city;
- completes a graduation program that leads to university admission, especially if their graduating academic average is 75% or higher; and,
- speaks at home a language other than English.

A secondary school graduate who enrolls in a B.C. public post-secondary institution is more likely to complete a post-secondary credential in four years if she or he:

- makes an immediate transition (direct entry);
- attends continuously;
- completes a graduation program that leads to university admission, especially if their graduating academic average is 75% or higher; and,
- attends an institute.

Retention of students by the universities is strong. Small colleges tend to keep their students for the shortest period and these students are the least likely to subsequently enroll elsewhere in the system.

New B.C. graduates in the study period became less likely to enroll in Arts and Sciences programs at the colleges and institutes, which could have future implications for expected transfers to universities and university colleges. Otherwise no strong trends were detected.

Multiple enrollments at different institutions within the same academic year amount to less than 8% of all enrollments. If only simultaneous enrollment is considered, the frequency is unknown, but is substantially below that level. Also, some proportion of all simultaneous multiple enrolment is spurious, resulting from administrative issues such as missed deadlines that affect some students. The data for this study were collected before any substantial numbers of students had electronic access through BC Campus to course offerings of other B.C. institutions, so rates of multiple simultaneous enrollment could rise in future, as this development will encourage electronic simultaneous enrollment in another B.C. institution.

Many students leave institutions without completing credentials, sometimes moving to other institutions where a credential might be the goal, but in many cases leaving the system entirely. The value of credentials to students might not be well understood: it is reasonable to assume that if a credential such as a Diploma were perceived as having less intrinsic value than the successful completion of specific courses, students would happily complete their studies without feeling any need to earn the credential. It is known that large numbers of students taking Arts and Science courses at colleges intend to transfer to another institution without completing a credential at that college. As Figure 21 shows, few students complete Associate degrees or academic diplomas at colleges compared with the numbers who are taking Arts and Science courses at the same colleges. Institutions might wish to review their credential packages to ensure they match the aspirations of students, with a view to increasing apparently low completion rates.

Although the movement of post-secondary students is very common and evidently complex, there is little to suggest that significant numbers of students are 'swirling' or moving frequently, because they are dissatisfied with access to programs or courses. However, a qualitative analysis, such as a survey, would provide a better indication of this.

Institutes, BCIT in particular, are very significant recipients of students who move from other types of institution and of late starters. These movements of students might have been under-estimated previously, as they take place both inside and outside the transfer articulation process.

## **Limitations of this study**

### **Not comprehensive**

A B.C. secondary school graduate who appears to have not made a transition in this study period could have:

- attended a private B.C. post-secondary institution;
- attended a post-secondary institution, public or private outside B.C.; or,
- been issued more than one PEN as a result of inaccuracy in the PEN matching/validation process (The error rate was not available for this study, but is believed to be small).

### **Changes of type and title of post-secondary institutions**

During the study period, the following institutions changed, were re-named or created:

- 2004/2005 OUC was re-named OKAN and its type changed from University College to Urban College. Many of its students transferred out with their entire programs to UBCO;
- 2005 UBCO – new institution created – its institution type is university;
- 2004/2005 UCC was re-designated as TRU and its institution type changed from University College to University for all programs;
- 2004/2005 OLA was re-designated as TRU-OL and its institution type changed from Institute to University for all programs. Data for TRU and TRU-OL were submitted separately for this study. However, it is understood that these are two component parts of a single institution.

No allowance has been made for these changes. These changes have significantly affected all relative sector shares except for the Small College sector.

### **Inconsistent protocols for reporting enrollment dates**

Registration dates ('Ministry-recorded start date') provided by the post-secondary institutions can be actual enrollment or payment dates, which might be months in advance of the educational period, or they might instead be dates that are fixed at a time when enrollment is deemed to be stable for that session e.g. 1 November for a Fall/ winter session.

### **Instructional period not reported**

The actual instructional period is not available and institutions do not have uniform instructional schedules. One school may offer short programs or programs with rolling entry and exit dates, whereas another might register students for an academic session lasting 8 months or longer. These limitations make it impossible to determine whether a student has simultaneously attended more than one post-secondary institution – the most that can be derived from the data is that the student attended one or more separate institutions during an academic year.

### **Inability to distinguish between primary and subsidiary enrollment**

If a student has enrolled in more than one institution within an academic year, there is nothing to indicate the primary institution attended either in terms of credit/course load or sequence and timing. For example, a full-time student at UVIC who takes one course at TRU-OL in the same academic year (which might be during the summer when the student is not attending UVIC) will (in the absence of better information) be assigned an equal 0.5 weight to each in some files within this study. Where there are multiple enrollments in a year, some files have prioritized institutions in reverse alphabetical order and taken the first institution as the primary, giving a bias towards institutions with titles starting 'Z' and away from those starting 'A'.

### **Programs of study**

Program categorization is not consistent across the post-secondary institutions. The colleges, university colleges and institutes report detailed CIP codes to the Central Data Warehouse. Universities use a different categorization, not necessarily what is reported in ESIS to Statistics Canada. Codes within both schema have been aggregated. Where a student has attended more than one institution, it might be difficult to determine whether s/he has pursued the same educational pathway throughout or has switched goals.

e.g.:

Attends small college  
Attends institute  
Attends institute

**Arts and Sciences** (university-level science)

**Developmental** (writing skills or ESL)

**Other** (University level Math course repeated to improve grade)

Transfers to urban college

**Applied** (Computer Software)

Transfers to university

**University Professional** (Engineering)

This sequence of transitions could be either logical progressions towards a fixed goal or might represent new goals with each move. The program types give few clues as to the study pathway.

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