

Introduction

This Student Transitions Project (STP) newsletter focuses exclusively on student mobility within the B.C. public post-secondary system¹. In this context, student mobility includes the sequential or simultaneous enrollment of academic credit registrants attending one or more B.C. public post-secondary institutions throughout their academic studies.

This mobility study was produced from fourteen years of student enrollment data, spanning Fall 2002 to Fall 2016. Data was collected in Fall 2016 by the STP and was subsequently assembled into 6.2 million mobile student records describing the numerous education pathways of each student who entered, continued, moved between and exited B.C. public post-secondary institutions each year.

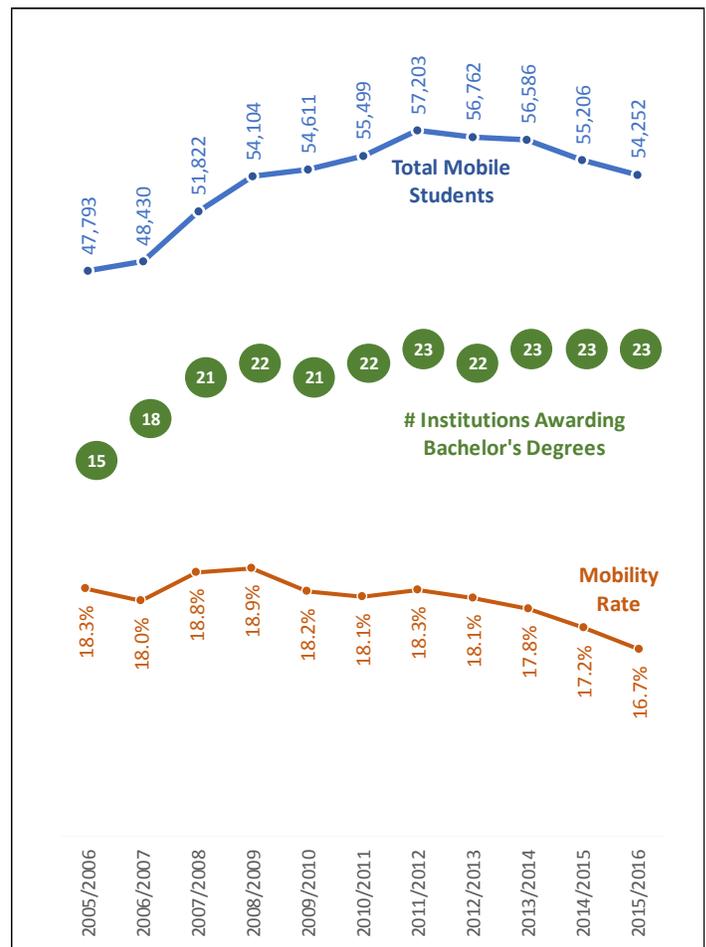
Summary of Student Mobility in B.C.

The STP continues to develop and enhance a variety of visual and numeric approaches for describing and quantifying student mobility within the B.C. public post-secondary system. An overview and summary of the system-level student mobility facts are provided here. More details are also available on the STP web site and other tools for institution-level data exploration are available on the secure STP Sharepoint site.

- The **incoming student pathways** of all 325,400 2015/2016 students enrolled in academic credits can be simplified into three main pathways: new students (24%), continuing students at the same institution (65%), and mobile students who switched institutions (17%)². [Page 7]
- The number of **mobile students** in 2015/2016 was 54,252 (see **Figure A**). This is simply the number of students who enrolled in a different institution in 2015/2016 from their previous institution of registration. The number of mobile students has declined 5% since its peak of 57,203 in 2011/2012. [Page 7-8]

- The current **student mobility rate** (16.7%) is the proportion of all academic credit registrants in the year who followed a mobile pathway to their institution of registration in 2015/2016 ($54,252 \div 325,400$). This rate has gradually declined from a high of 18.9% in 2008/2009, likely brought on by post-secondary institution designation changes and increasing opportunities for students to earn a Bachelor's degree at any of B.C.'s 25 public post-secondary institutions (see **Figure A**). [Page 7]

Figure A: Student Mobility Trends in B.C.



1. In the most recent academic year (2015/2016), there were roughly 325,400 students registered in academic credits, representing 76% of the 428,300 total unique headcount students enrolled in B.C.'s 25 public post-secondary institutions. International students enrolled in academic studies in B.C. public post-secondary institutions are included in B.C.'s student mobility studies.
2. Mobile students can simultaneously be continuing students at another institution, thus the sum of percentages across the three pathways exceeds 100%.

- Who are the mobile students?** Some students are more mobile than others within the B.C. public post-secondary system, as revealed in their range of mobility rates along different student characteristics (see **Figure B**). For example, females and Aboriginal students, at 18.0% and 22.8%, have higher mobility rates than males (15.5%) and non-Aboriginal students (16.5%); and domestic students (18.0%) are twice as mobile as international students (8.9%). Furthermore, students who switched programs or completed a credential, before subsequently continuing in the following year, are much more likely to have switched institutions (45.5% and 28.3%) than students who continued in the same CIP or program (8.9%) or had not completed a credential beforehand (15.8%). [\[Pages 9 - 10\]](#)

- Sector mobility rates** in **Figure C** provide a measure of student mobility from each institution type or sector in B.C. This includes mobile students who switched institutions within the same or between different institution types. In 2015/2016, registrants last enrolled in B.C. colleges had higher mobility rates (33.1%) than students last enrolled in TIUs (27.5%), Institutes (24.6%) or RIUs (13.3%). Due to the flexibility and support of the B.C. College transfer system, it is not surprising that students from B.C. colleges are more mobile than students in other institution types. In the last few years, student mobility rates have been declining in each sector. [\[Page 10\]](#)

- Regional mobility rates** in **Figure C** provide a measure of student mobility for each region of B.C. and includes all students who switched institutions within the same region or to a different region of B.C. In 2015/2016, students from the Cariboo-North (33.5%) and Thompson-Okanagan-Kootenays (29.6%) had the highest mobility rates, as compared to Vancouver Island (22.7%) and Mainland/Southwest (20.8%). Student mobility rates are declining in the Thompson-Okanagan-Kootenay and Mainland Southwest regions, but rates remain relatively unchanged in the Cariboo-North and Vancouver Island regions. [\[Page 10\]](#)

Figure B: Student Mobility Rates of Selected Sub-Populations

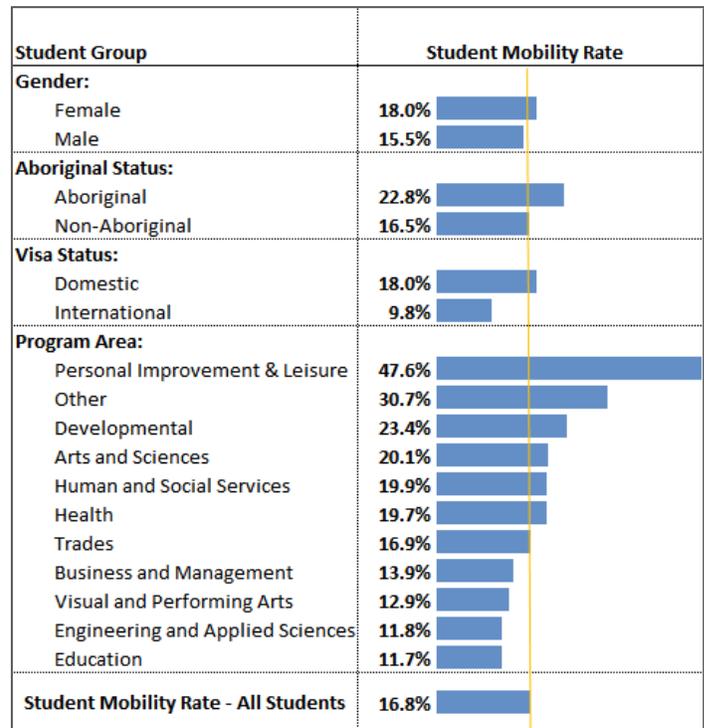
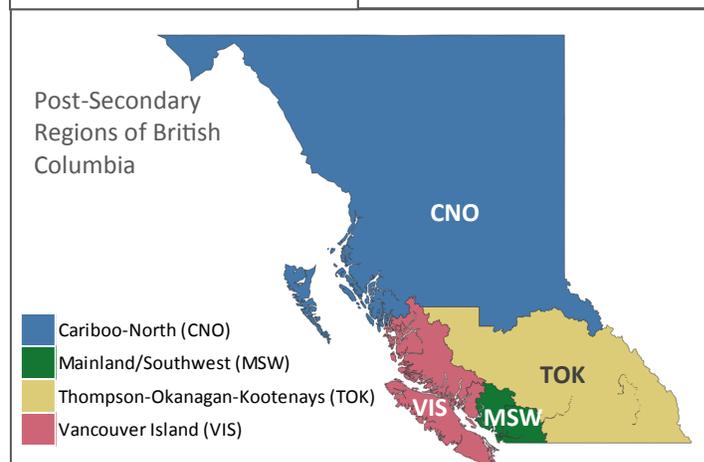
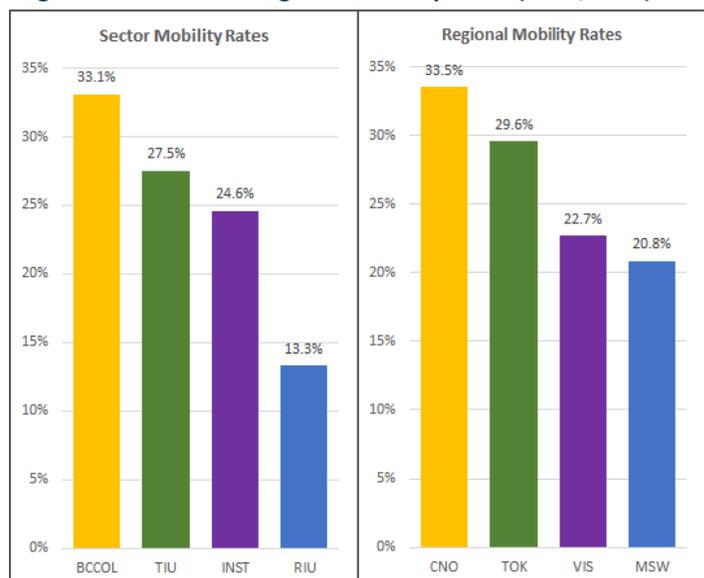


Figure C: Sector and Regional Mobility Rates (2015/2016)



- While the student mobility rates by sector and region are useful indicators for comparing sectors and regions, the **Student Mobility Diagrams** provide a more comprehensive visual overview of the number and direction of students flowing between each of the B.C. institution types and each of the B.C. regions. [Pages 11 and 14]

- Sector Mobility Diagrams** in **Figure D** reveal that the most dominant pathways for students are:
 - the traditional transfer pathway from B.C. colleges to research-intensive universities;
 - the pathway from TIUs to all other institution types; and
 - the pathway from B.C. colleges and RIUs to institutes.
- The **Regional Mobility Diagrams** in **Figure E** show a remarkable balance of student flows between each of the four regions of B.C. with roughly equal numbers of students entering each region in 2015/2016 as those who left. The only significant exception is the net inflow of 1,300 students into the Mainland-Southwest region from Vancouver Island.

- By studying the **net flows between institution types** visible in the sector mobility diagram in **Figure D** it is evident that institutes have a net inflow of students from all three other institution types: Colleges (+1,200), RIUs (+2,900) and TIUs (+2,300). [Page 12]
- Student mobility into three institutes** from other institutions is represented visually in the **Chord Diagram** in **Figure F**. BCIT captures the majority (62%) of the student mobility to institutes, whereas JIBC gets 37% and NVIT, a much smaller institution, brings in 2% of the mobile students to institutes. Mobile students to BCIT and JIBC were twice as likely to enrol in non-credential institute programs, such as “other” or “none”, as opposed to certificates and diploma programs. Mobile students who moved from an RIU to BCIT or JIBC were much more likely at 43% to have first completed a credential at the RIU before moving to the destination institute, compared to students from TIUs (21%), B.C. colleges (14%) or other institutes (14%). Most of these students enrolled in a non-credential program at BCIT or JIBC. [Page 12-13]

Figure D: Sector Mobility Diagram (2015/2016)

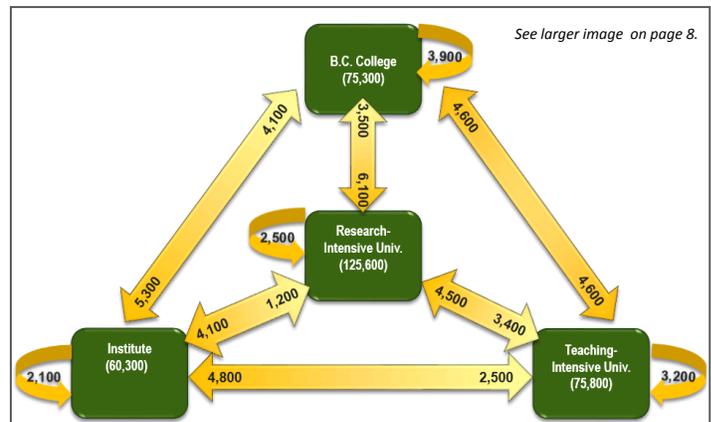


Figure E: Regional Mobility Diagram (2015/2016)

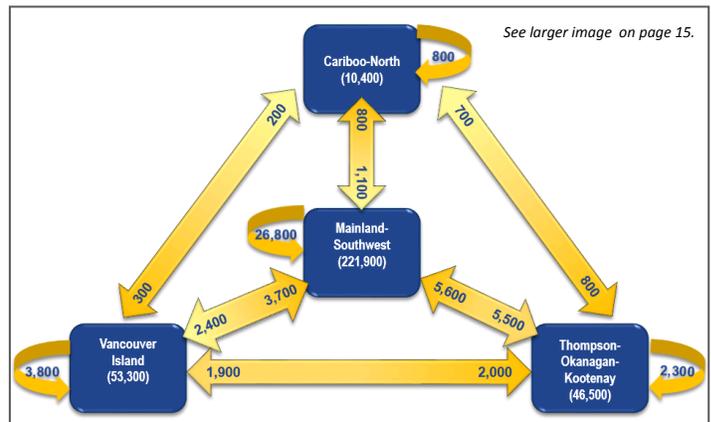
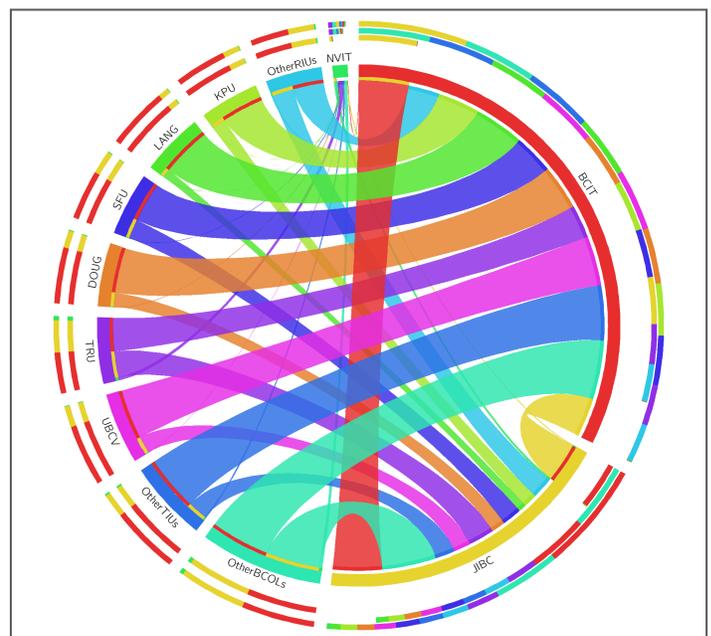


Figure F: Chord Diagram of Student Mobility into Institutes (2015/2016)



Notes for Figure F: (a) This Chord Diagram is a data visualization summarizing the flow of students from other institutions into each of the three institutes in B.C. (BCIT, JIBC and NVIT). (b) The width of the ribbons indicate the volume of student flows into the institutes and the color of each ribbon corresponds to the color of the origin institution. (c) Each of the institutions and aggregated groups of institutions, are represented by colored segments on the boundary of the circle, with larger segments representing larger origin or destination institutions. (d) Created using *Circos Table Viewer*.

- Within-Region Student Mobility** occurs when students switch from one institution to another, but remain in the same region of B.C. The majority (63%) of student mobility occurs within region, as opposed to 37% that occurs between regions (see **Figure G**). Student mobility within a single region is largely attributed to students moving between just two or three institutions within the region. Only within the Mainland/Southwest region, where there are comparatively more institutions serving a larger population in a smaller land area, we find the distribution of within region student mobility more widespread across a greater number of institutions. [Page 15]
- Within-Sector Student Mobility** occurs when students switch from one institution to another, but remain in the same sector or institution type in B.C. This type of student mobility is not as common as within region student mobility because the majority (78%) of student mobility occurs when students move from one institution type to another and thus, only 22% of student mobility occurs within the same sector or institution type. [Page 16]
- Compared to student mobility diagrams that are useful for showing the total volume of mobile students between sectors or regions, **Student Pathways Diagrams** in **Figure H** reveal the timing of the student mobility (either immediately or after a stop out period); and the type of student mobility (moving to a new institution for the first time or returning to an institution previously attended). These diagrams provide a visual and numeric description of the numerous pathways or routes into and out of a B.C. public post-secondary system, including new and departing students, plus direct pathways from the preceding time period (move, return, continue) and indirect pathways occurring after a stopout period (stopout move, stopout return, stopout continue). Each of the different pathways diagrams have an underlying summary table with the counts of students along each pathway at the institution level. These diagrams can also be provided for a specific institution, region or sector. [Page 17]

Figure G: Student Mobility is Primarily Within Region and Between Sectors

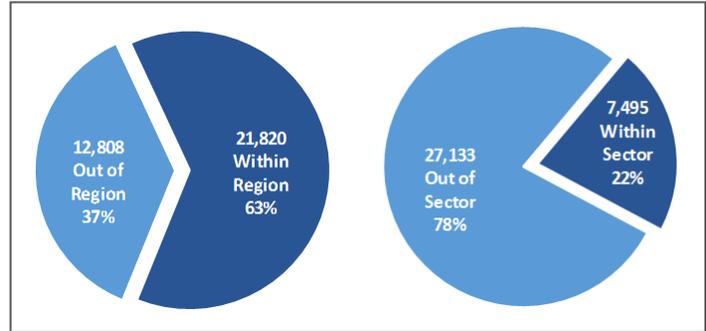
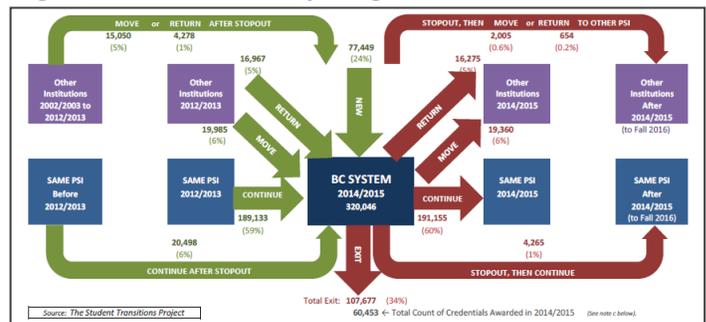


Figure H: Student Pathways Diagram See larger image on page 9.



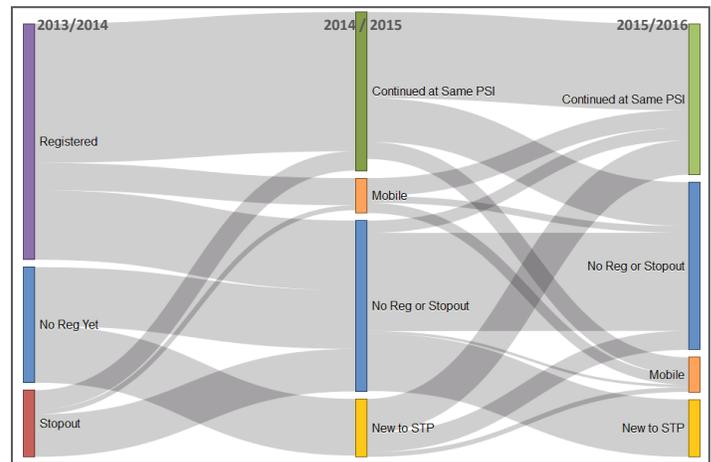
Post-Secondary Student Mobility (PSM) Sub-committee of STP:

This newsletter was prepared by Joanne Heslop, Manager of the Student Transitions Project (STP). Over the last several years, mobility research in B.C. has benefited from the research directions provided by the **Post-secondary Student Mobility (PSM) Sub-committee** of the STP. We would like to acknowledge and thank the following current* and former members of the PSM subcommittee, for their input and guidance. These individuals have represented post-secondary institutions and sectors within the B.C. public post-secondary system for this STP sub-committee.

- *Robert Adamoski** - Director, Research and Admissions, BCCAT (PSM Chair)
- *Joanne Heslop** - Manager, Student Transitions Project
- Kathleen Bigsby** - Director (retired), Institutional Analysis & Planning, Kwantlen Polytechnic University
- Hugh Judd** - Central Data Warehouse Coordinator, Research and Analysis, Ministry of Advanced Education
- Bob Cowin** - Director (retired), Institutional Research & Planning, Douglas College
- Jean Karlinksi** - Research Coordinator (retired), BCCAT
- Frank DiPuma** - Manager (retired), Institutional Research, Capilano University
- Jacy Lee** - former Director, Institutional Research and Planning, Simon Fraser University
- *Keith Ellis** - Director, Institutional Research & Planning, Douglas College
- *Zareen Naqvi** - Director, Institutional Research and Planning, Simon Fraser University
- Devron Gaber** - Director (retired), Admissions, BCCAT (former)

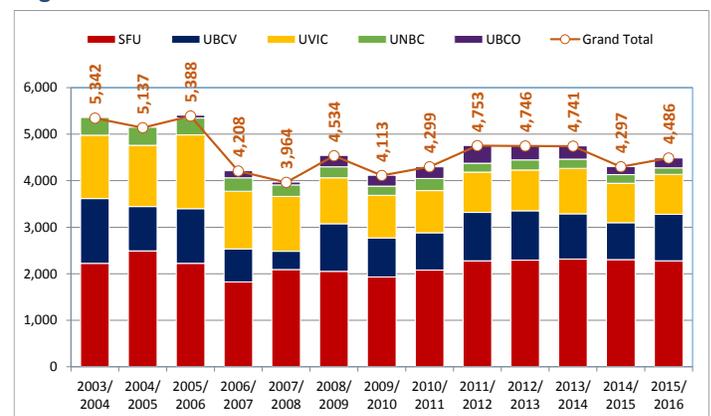
- The student mobility and student pathways diagrams provide very detailed student mobility information from one year to the next, whereas a **Three-Year Registration State Sankey Diagram in Figure I** provides a simple visual display of the relative volume of students flowing between different registration states (new, registered, not registered, stopout, mobile) over a longer (three-year) period, from 2013/2014 to 2015/2016. The most dominant student flow is the continued registration from one year to the next, as depicted by its wide flow pattern throughout the Sankey diagram. [Page 18]

Figure I: Three-Year Registration State Sankey Diagram



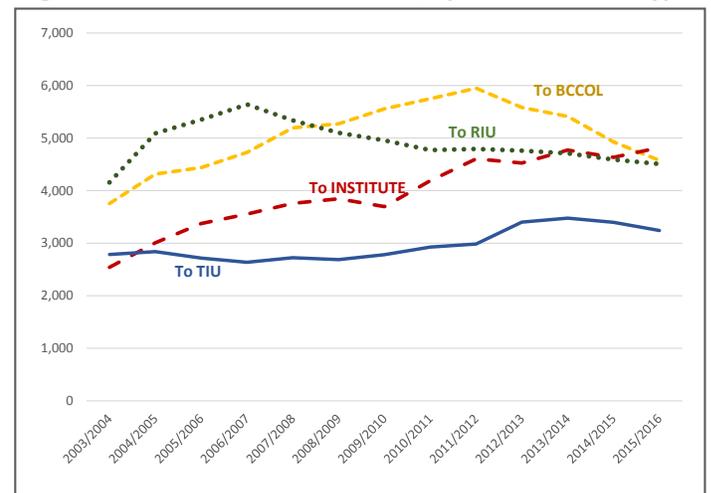
- A long-standing interest exists in B.C. to track and quantify the subset of mobile students who transfer from B.C. colleges to research-intensive universities (see inset box for a **Brief History** on page 7). This group of mobile students that we now call **Traditional Transfer Students**³ currently totals roughly 4,500 students in 2015/2016, down from annual transfer volumes in excess of 5,000 students per year a decade ago⁴. A visual display of the system-wide and institution-level transfer student trends shows that SFU receives the largest share (about half) of traditional transfer students to RIUs each year (see **Figure J**). A general downward trend in transfer students is evident at each RIU, with the exception of SFU showing relatively little change. [Page 19]

Figure J: Traditional Transfer Students to RIUs



- Looking at the **Trends in Mobile Students from TIU's** allows us to evaluate the impact of recent changes to institution designations, specifically the creation of Teaching-Intensive Universities (TIU's). As shown in **Figure K**, the number of mobile students leaving TIUs and entering RIU's has declined by about 1,100 students since 2006/2007, perhaps suggesting that students are staying at TIU's to complete their credential. [Page 20]

Figure K: Mobile Students from TIUs, by Destination PSI Type



3. Traditional transfer students transferred from B.C. Colleges, Institutes and Teaching-Intensive Universities to Research-Intensive Universities with a minimum of 24 credits and a cumulative GPA of at least 2.00 with a basis of admission "B.C. College" or "B.C. Associate Degree".

4. The basis of admission (BOA) category is used to identify traditional college transfer students entering BC research-intensive universities. The STP2015 data used in this analysis includes submissions to the STP from UBCV and UBCO with a greater share of BOA="other" and smaller share of BOA="BC College" than previously submitted for the same time period – students entering UBCO/UBCV from TIU's from 2006/2007 onward were assigned BOA="university transfer" in UBC's student system (and submitted to STP with BOA="other") instead of BOA="BC College". Therefore, the total number of traditional transfer students reported in this newsletter is lower than previously reported for the same time period, up to and including 2012/2013.

Conclusion

The STP’s Post-Secondary Student Mobility studies are conducted annually or biennially, depending upon project priorities. While the STP’s methodology for tracking student movement between institutions has evolved over time, the STP’s goal is to provide meaningful and useful information to our stakeholders in order to support the management and planning of programs in B.C. post-secondary system and ultimately satisfy the education needs of our students.



More detailed student mobility results are provided on the following pages of this newsletter.

The **Student Transitions Project** is British Columbia's collaborative research project that measures student success from the K-12 to post-secondary systems. This effective system-wide partnership, involving B.C.'s education and advanced education ministries and post-secondary institutions, is tracking student success by reporting on student transition rates to post-secondary education, student mobility among post-secondary institutions, and post-secondary completion and retention rates.

Special Thanks: The STP would like to thank the Ministry of Education, the Ministry of Advanced Education, Skills and Training and the B.C. public post-secondary institutions for collaborating in this research effort. Without their co-operation and data contributions, this research could not have been accomplished.

Where to find more information: Additional information is also available to post-secondary institutions seeking more detailed information on student transitions specific to their region or institution.

STP Highlights newsletters and reports are available on the public Student Transitions Project web site at:

<https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education/data-research/student-transitions-project>

Research Results Prepared by Joanne Heslop, Manager, Student Transitions Project

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Describing and Quantifying Student Mobility in British Columbia

Student Pathways into B.C. Public Post-Secondary Registration in 2015/2016

There were roughly 325,400 students registered in academic credits in B.C.'s 25 public post-secondary institutions in 2015/2016. Where did these students come from? (See Figure 1).

- 65% were **continuing** students at the same institution where they last registered, including 59% who last registered in 2014/2015, and 6% who last registered in 2013/2014 or earlier (after stopping out in the previous year or longer).
- 24% were **new** to the B.C. system, of which roughly half (38,300 students) were former students from B.C.'s K-12 system, including 33,400 grade 12 graduates and 4,900 non-graduates; and the

other half (41,700) had no previous history⁵ in the B.C. K-12 system.

- 17% were **mobile** students, including 11% who were last registered in the previous year, and 6% who last registered prior to 2014/2015, after stopping out for at least one year. These students followed at least one of four possible mobile pathways:
- 6% moved from one institution to a new institution they never attended previously;
- 5% returned to an institution previously attended, after last registering elsewhere;
- 5% moved from one institution to another, after a stop out period; and
- 1% returned to a previously attended institution after a stop out period.

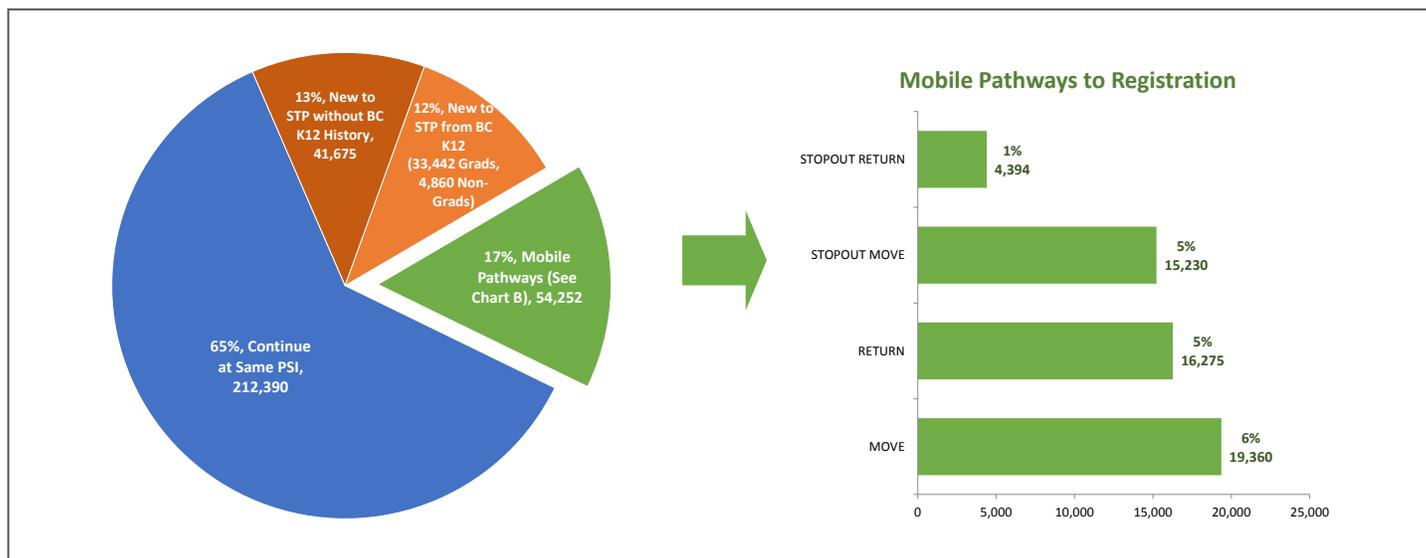
- Note that students may attend multiple institutions in a year, either simultaneously or sequentially, thus creating multiple pathways in a single year.

Brief History of Student Mobility Studies in B.C.

For many years, the B.C. Council on Admissions and Transfer (BCCAT) conducted collaborative research studies with the B.C. Colleges and B.C. universities to help quantify and predict the number of students transferring from B.C. colleges to B.C. universities.

In 2008, after the creation of the STP data sharing agreement and database, the STP was invited to prepare student mobility studies from the robust new STP data set. The study results and subsequent evolution and enhancements to these STP mobility studies have enlightened and broadened the provincial perspective on student mobility. We now have a better understanding that students frequently move in all directions between all types of post-secondary institutions in B.C.

Figure 1: Pathways to Post-Secondary Registration in 2015/2016



5. New students to the B.C. public post-secondary system without any previous B.C. K-12 enrollment history includes: (a) students without a Personal Education Number (PEN), (b) students who graduated from the BC K-12 system before 1991, and (c) students who graduated outside of B.C., such as students from other Canadian provinces and international students who graduated in another country.

Declining Trend in Mobile Students & Student Mobility Rate

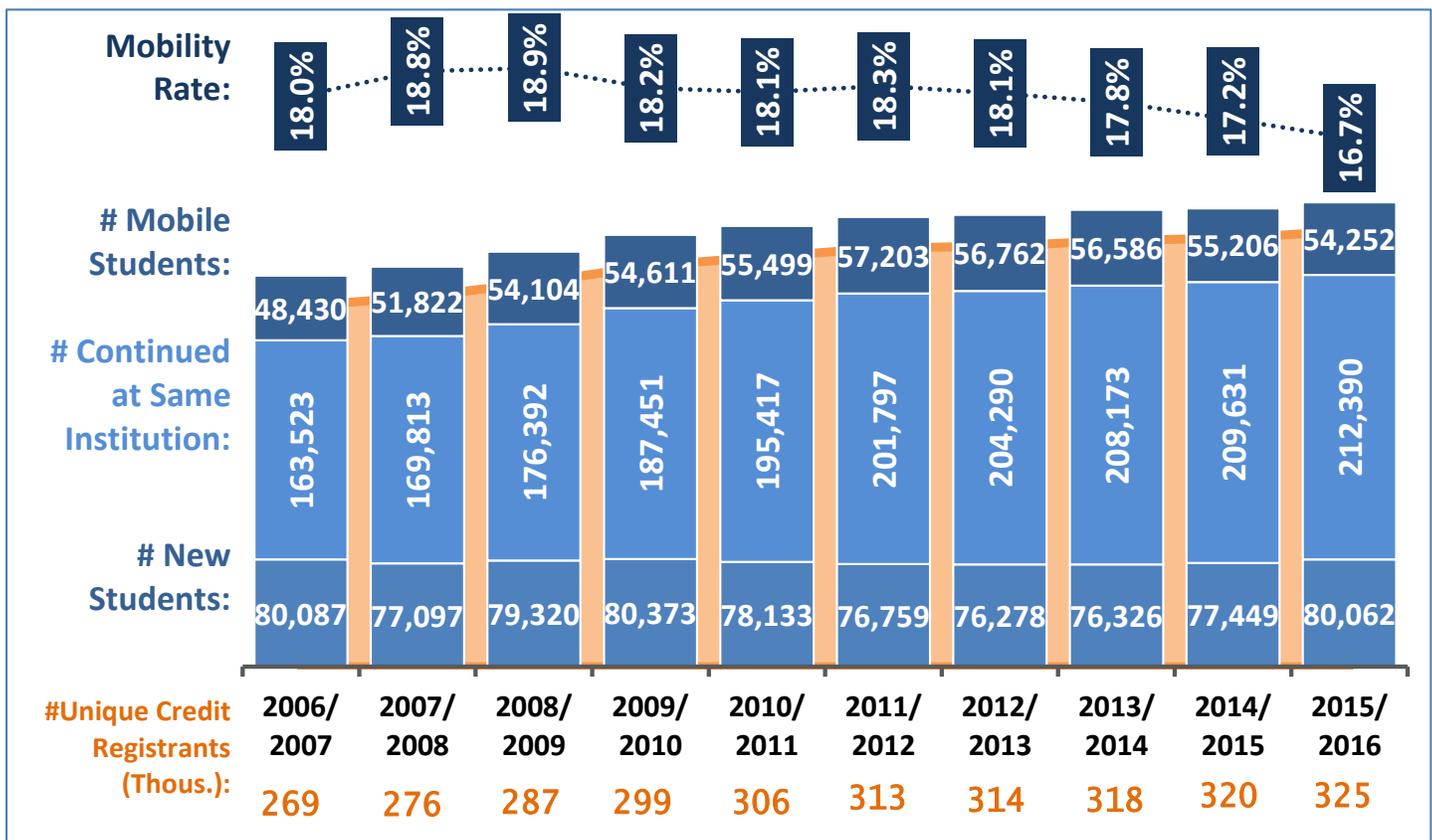
The B.C. public post-secondary system has seen a 21% growth rate in unique academic credit registrants over the last decade, increasing from 269,000 in 2006/2007 to 325,000 in 2015/2016. Over the same time period, the number of mobile students, or those who switched institutions from one year to the next, increased by just 12% from 48,000 to 54,000 mobile students.⁶ Over this time period, the number of mobile students reached a peak of 57,200 in 2011/2012.

The **student mobility rate** is the proportion of the total unique headcount credit registrants who moved from one institution to another, or returned to a previously attended institution, after last enrolling elsewhere. In the most recent year for which data is available (2015/2016), the student mobility rate was 16.7% or (54,252 mobile students ÷ 325,382 unique academic credit registrants).

As shown in **Figure 2**, the student mobility rate has traditionally remained between 17% and 18%, with an average of 54,400 students moving among B.C. public post-

secondary institutions annually. This year is the first time we have seen the student mobility rate dip below 17%, currently at 16.7%. The student mobility rate provides a simple gauge of student movement in the B.C. public post-secondary system each year and minor annual fluctuations in this rate are expected. The gradual decline in the student mobility rate might be due to the numerous new opportunities available to students to complete a bachelor’s degree or other credentials at a single institution, without the need to transfer elsewhere for completion.

Figure 2: Student Mobility Trend (2006/2007 to 2015/2016)



6. Each year, student enrollments are re-stated and student mobility rates are recalculated from the latest enrollment submissions to the STP, thus ensuring consistency with any updates or operational changes to student enrollment records. The final year reported here (2015/2016) excludes registrants with a later start date in the academic year, such that their mobility information is not captured yet. Any missing students will be included in next year’s reporting cycle.

Who are the Mobile Students?

Some students are more mobile than others. Students registered in the B.C. public post-secondary system in both 2014/2015 and 2015/2016 have a varying range of mobility rates, depending on their personal characteristics, program enrolled in, study level and credential sought. As shown in **Figure 3**, some student groups are more mobile than others, compared to the overall student mobility rate (16.8%) for students enrolled in the B.C. public post-secondary institutions in both 2014/2015 and 2015/2016.

- Females (18.0%) and Aboriginal students (22.8%) have higher than average mobility rates.
 - Among the 2,262 mobile Aboriginal students, the females out-numbered males by a ratio of 2.4:1 and the females were more mobile than males (24.3% versus 19.8%).⁷
 - The largest share of Aboriginal students came from the Mainland/Southwest region, but Aboriginal students from the Cariboo-North (31.6%) and Thompson-Okanagan-Kootenays (27.0%) regions were more mobile than Aboriginal students from the Mainland/Southwest (21.0%) and Vancouver Island (22.0%) regions.⁷
 - Aboriginal students originating from colleges (30.6%) and institutes (29.2%) were more mobile than similar students who

Figure 3: Student Mobility Rates of Students Continuing in the B.C. System in 2015/2016

Student Group	Mobile Students	Total Registrant	% Share of Mobile StdnTs	% Share of All Registrants	Student Mobility Rate
Gender:					
Female	20,266	112,766	59%	55%	18.0%
Male	14,387	92,929	42%	45%	15.5%
Aboriginal Status:					
Aboriginal	2,262	9,923	7%	5%	22.8%
Non-Aboriginal	32,366	195,729	93%	95%	16.5%
Visa Status:					
Domestic	31,927	177,600	92%	86%	18.0%
International	2,758	28,202	8%	14%	9.8%
Age:					
19 to 25	19,776	113,308	57%	55%	17.5%
26 to 55	10,159	60,843	29%	30%	16.7%
18 and younger	4,514	29,470	13%	14%	15.3%
56 and older	352	2,570	1%	1%	13.7%
Switched Programs/CIP:					
Switched to New CIP in BC System	21,362	46,926	62%	23%	45.5%
Continuing in Same CIP	14,835	166,135	43%	81%	8.9%
Earned Credential Before Moving:					
Credential Received	5,715	20,215	17%	10%	28.3%
No Credential	29,716	187,865	86%	91%	15.8%
Program Area:					
Personal Improvement & Leisure	588	1,236	2%	1%	47.6%
Other	387	1,262	1%	1%	30.7%
Developmental	1,253	5,347	4%	3%	23.4%
Arts and Sciences	16,964	84,557	49%	41%	20.1%
Human and Social Services	3,451	17,371	10%	8%	19.9%
Health	3,844	19,556	11%	10%	19.7%
Trades	1,248	7,400	4%	4%	16.9%
Business and Management	4,951	35,641	14%	17%	13.9%
Visual and Performing Arts	862	6,657	2%	3%	12.9%
Engineering and Applied Sciences	3,172	26,914	9%	13%	11.8%
Education	840	7,179	2%	3%	11.7%
Study Level:					
Developmental	1,256	5,367	4%	3%	23.4%
Undergraduate	33,062	184,390	95%	90%	17.9%
Graduate	668	17,048	2%	8%	3.9%
Credential Category at Origin PSI:					
None	8,868	21,018	26%	10%	42.2%
Associate Degree	5,170	14,532	15%	7%	35.6%
Other	3,415	12,897	10%	6%	26.5%
Short Certificate	491	1,973	1%	1%	24.9%
Diploma	5,193	26,066	15%	13%	19.9%
Developmental Credential	654	3,410	2%	2%	19.2%
Certificate	2,679	14,304	8%	7%	18.7%
Advanced Certificate	63	398	0%	0%	15.8%
Advanced Diploma	98	637	0%	0%	15.4%
Post-Degree Certificate	115	838	0%	0%	13.7%
Apprenticeship	289	2,289	1%	1%	12.6%
Bachelors Degree	11,099	96,357	32%	47%	11.5%
Graduate Certificate	37	367	0%	0%	10.1%
Post-Degree Diploma	258	2,945	1%	1%	8.8%
Graduate Diploma	27	503	0%	0%	5.4%
First Professional Degree	124	2,722	0%	1%	4.6%
Masters Degree	479	10,804	1%	5%	4.4%
Doctorate	83	5,276	0%	3%	1.6%
Grand Total All Students Registered in both 2014/2015 and 2015/2016	34,628	205,652	100%	100%	16.8%

originated from TIUs (22.5%) or RIUs (15.6%).⁷

- Domestic students (18.0%) are about twice as mobile as international students (9.8%).
- Students who switched programs have higher mobility rates (45.5%) than students who

remained in the same program or Classification of Instructional Program (CIP) code (8.9%).

- Students who earned a credential in 2014/2015 and pursued more post-secondary education in the following year were almost twice as likely to switch institutions (28.3%) than

7. Details among Aboriginal student sub-populations are not shown in **Figure 3**.

Who are the Mobile Students?

(continued)

those who did not earn a credential in 2014/2015 (15.8%).

- Students in Developmental programs (23.4%) had higher mobility rates than students in undergraduate (17.9%) or graduate programs (3.9%).
- Students in programs designed for transfer (such as the Associate Degree, 35.6%) or shorter credential programs (Short Certificate, 24.9%) were more mobile than students in longer programs (Bachelor’s Degree, 11.5% or PhD, 1.6%).

Mobility Rates by Sector of Origin

As shown in **Figure 4** for recent 2015/2016 registrants, those who previously enrolled in a B.C. College had a higher mobility rate (33.1%) than those who last enrolled in a TIU (27.5%), institute (24.6%) or RIU (13.3%)⁸. The B.C. College transfer system encourages and facilitates transfer from colleges, thus it is expected that B.C. Colleges would have the highest mobility rate.

The mobility rate is declining in each of the sectors, as shown in the trend lines for each sector of **Figure 4**.

Mobility Rates by Region of Origin

Students last enrolled in the Cariboo-North (33.5%) and Thompson-Okanagan-Kootenays (29.6%) had the highest mobility rates in 2015/2016, as compared to students from Vancouver Island (22.7%) and Mainland/Southwest (20.8%) (see **Figure 5**)⁹.

In terms of regional trends, student mobility rates are declining in the Thompson-Okanagan-Kootenay and Mainland Southwest regions, but rates remain relatively unchanged in the Cariboo-North and Vancouver Island .

Figure 4: Mobility Rates, by Sector of Origin

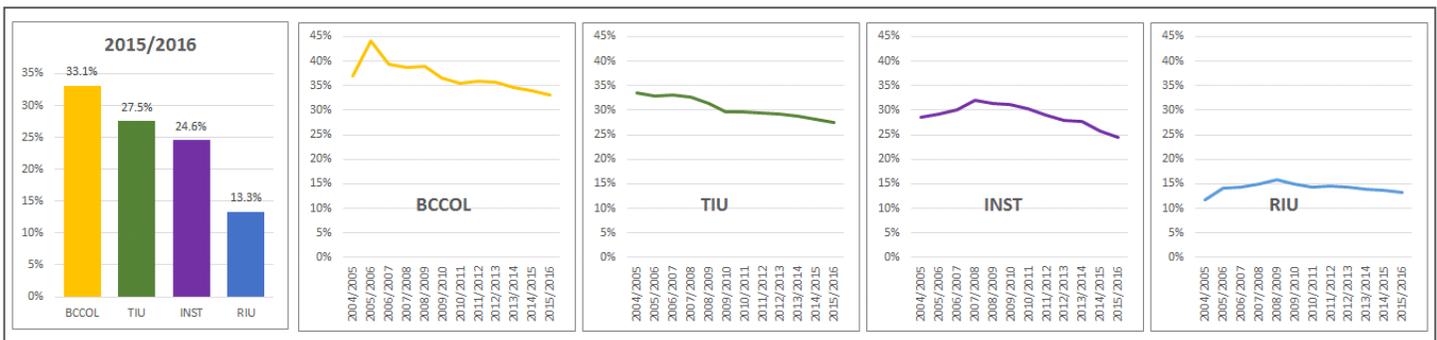
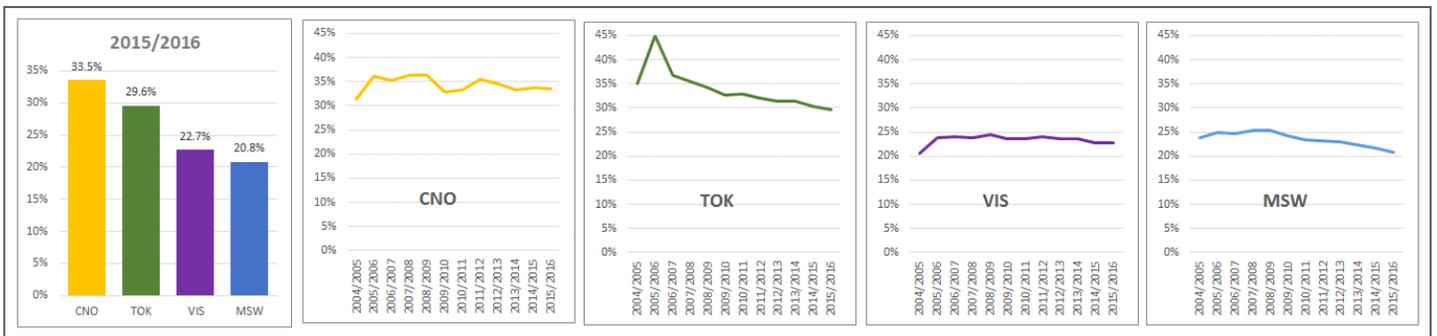


Figure 5: Mobility Rates, by Region of Origin



8. Mobility rates by sector of origin are a ratio of mobile students in the sector of origin to all continuing academic credit registrants from any previous year of registration (excluding new students in the destination sector). The 2015/2016 overall mobility rate of 16.7% is not directly comparable because it is a ratio of all mobile students to all academic credit registrants in 2015/2016 (including new students).

9. Mobility rates by region of origin are a ratio of mobile students in the region of origin to all continuing academic credit registrants from any previous year of registration (excluding new students). The 2015/2016 overall mobility rate of 16.7% is not directly comparable because it is a ratio of all mobile students to all academic credit registrants in 2015/2016 (including new students).

Student Mobility Between Institution Types

Figure 6: Student Mobility Between Institutions and Sectors in the B.C. Public Post-Secondary System (2015/16)¹⁰

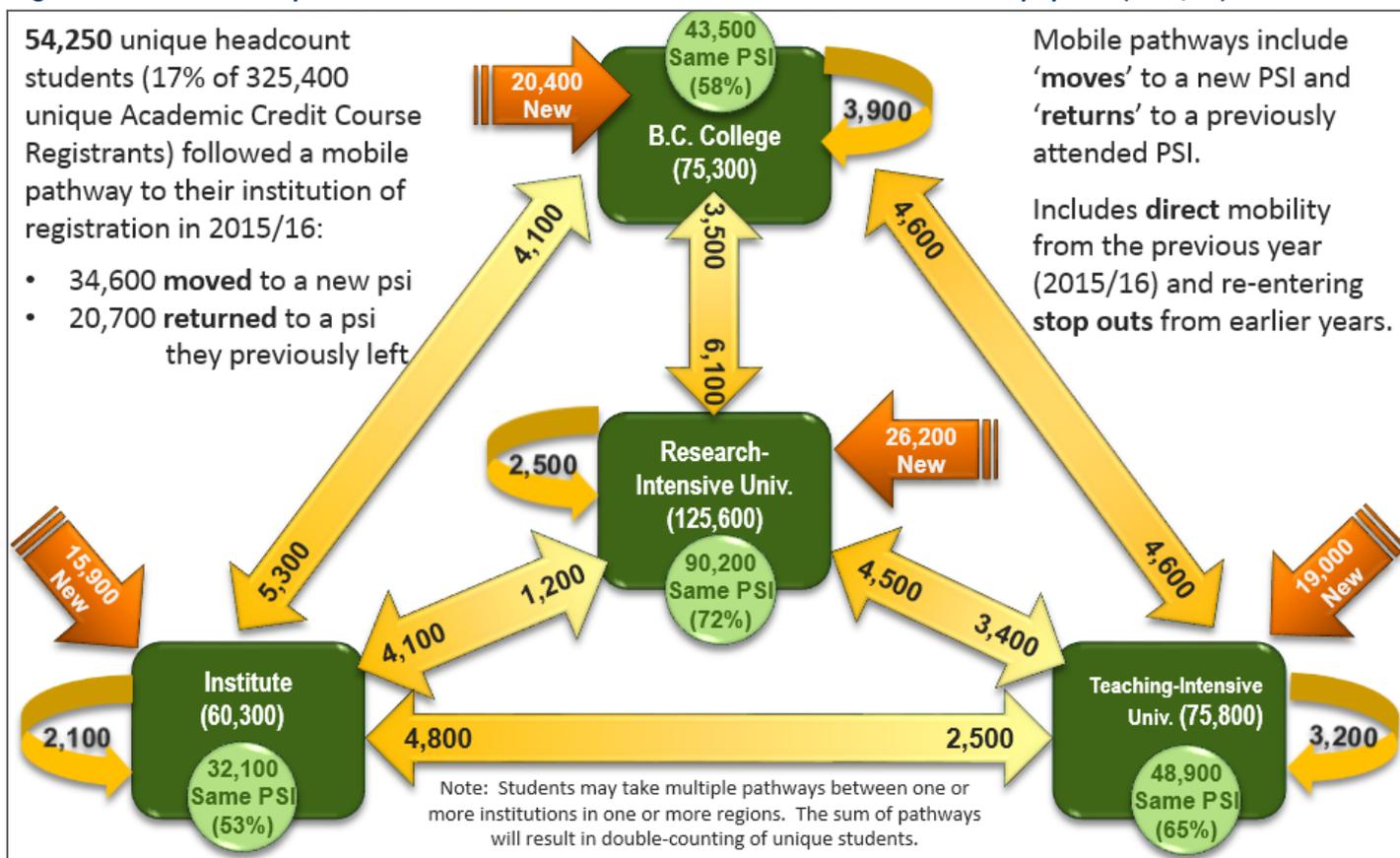


Figure 7: Matrix of Student Mobility Between Institution Types (2015/2016)

From	To PSI Type			
	BCCOL	INST	RIU	TIU
BCCOL	3,900	5,300	6,100	4,600
INST	4,100	2,100	1,200	2,500
RIU	3,500	4,100	2,500	3,400
TIU	4,600	4,800	4,500	3,200

Post-Secondary Institutions by Institution Type

B.C.'s public post-secondary institutions belong to one of four institution types or sectors, as defined by the Ministry of Advanced Education, Skills and Training. Institution designations have changed over time and these are the current groupings by institution type. Any historical mobility information in this study assigns each institution to its current institution type, as defined below.

Institutes – British Columbia Institute of Technology, Justice Institute of B.C., Nicola Valley Institute of Technology.

Community Colleges – Camosun College, College of New Caledonia, College of the Rockies, Douglas College, Langara College, North Island College, Northern Lights College, Northwest Community College, Okanagan College, Selkirk College, Vancouver Community College.

Research-Intensive Universities – Simon Fraser University, University of British Columbia, University of British Columbia Okanagan, University of Northern British Columbia, University of Victoria.

Teaching-Intensive Universities – Capilano University, Emily Carr University of Art + Design, Kwantlen Polytechnic University, Royal Roads University, Thompson Rivers University, University of the Fraser Valley, Vancouver Island University.

10. Sector mobility diagrams also available on the public STP web site.

Net Flows Between Institution Types

The student mobility diagram in **Figure 6** allows us to derive net student flows between institution types. A net inflow between institution types occurs when more students move into the institution type, than move away from it. Conversely, a net outflow occurs when more students move away from the institution type than the number of incoming mobile students from other institution types.

- B.C. Colleges have a net outflow of students to institutes (-1,200) and RIUs (-2,600), but a balance of flows between TIUs and colleges.
- TIUs have a net outflow of students to RIUs (-1,100) and institutes (-2,300).
- RIUs have a net inflow of students from colleges (+2,600) and TIUs (+1,100), but a net outflow to institutes (-2,900).
- Institutes are somewhat unique because they have a net inflow of students from each of the three other institution types: Colleges (+1,200), RIUs (+2,900) and TIUs (+2,300).

Notes for Figure 8: (a) This Chord Diagram is a data visualization summarizing the flow of students from other institutions into each of the three Institutes in B.C. (BCIT, JIBC and NVIT). (b) The width of the ribbons indicate the volume of student flows into the institutes and the color of each ribbon corresponds to the color of the origin institution. (c) Each of the institutions and aggregated groups of institutions, are represented by colored segments on the boundary of the circle, with larger segments representing larger origin or destination institutions. (d) Created using *Circos Table Viewer*.

Mobile Students to Three Institutes in B.C.

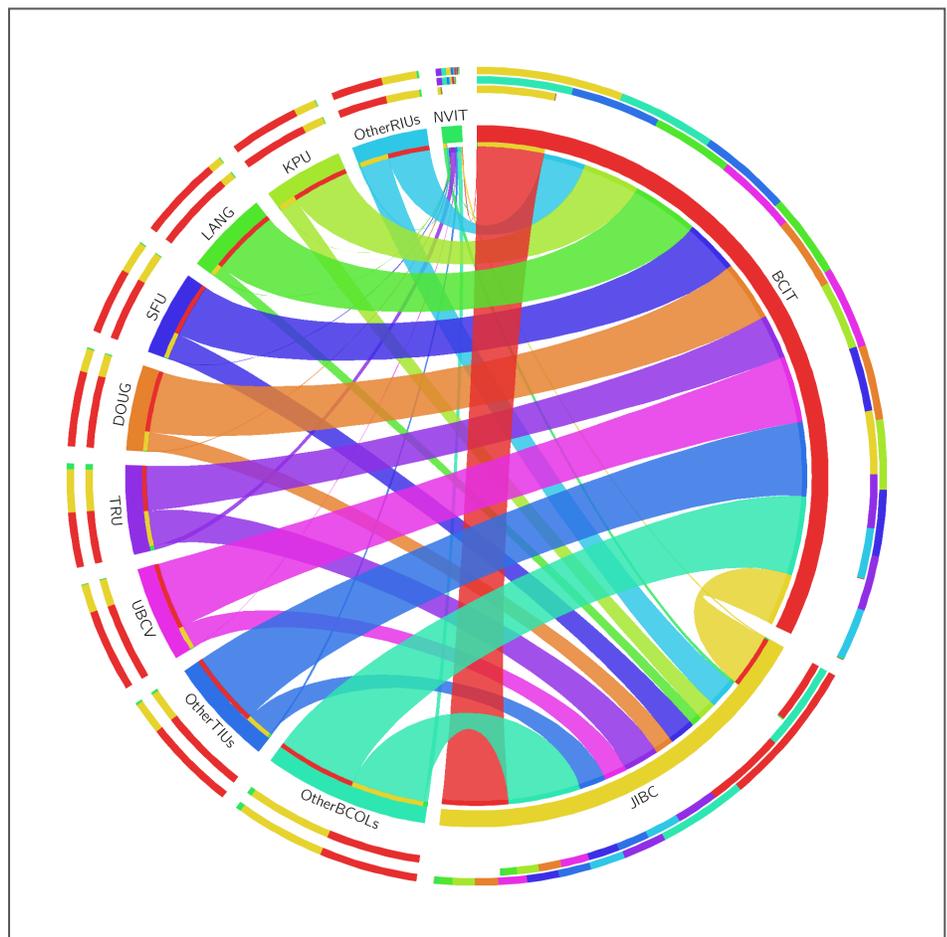
Given that institutes in B.C. have a provincial mandate and a net inflow of students from all other institution types, there is some interest among post-secondary stakeholders to gain a better understanding of this phenomenon. Following is a brief summary of facts about student mobility to B.C.’s institutes in 2015/2016:

- Student mobility to institutes includes students moving to institutes for the first time, or returning to institutes from other B.C. public post-secondary

institutions. This mobility is summarized visually in a Chord Diagram (see **Figure 8**).

- There are three institutes in the province, including B.C. Institute of Technology (BCIT) with its main campus in Burnaby, Justice Institute of B.C. (JIBC) with its main campus in New Westminster or Nicola Valley Institute of Technology (NVIT) in Burnaby and Merritt.
- BCIT captures the majority (62%) of the student mobility to institutes, whereas JIBC gets 37% and NVIT, a much smaller institution, brings in 2% of the mobile students to institutes.

Figure 8: Chord Diagram of Student Mobility into Institutes



Mobile Students to Institutes in B.C., continued

- Mobile students to institutes come from B.C. colleges (34%), TIUs (31%), RIUs (26%) and in smaller shares from other institutes (13%)¹¹. The institution sources of mobile students varies by destination institute.
 - **BCIT** captures 36% of mobile students from B.C. colleges, plus roughly equal shares from TIUs (30%) and RIUs (29%). Just 9% come from other institutes, primarily JIBC.
 - **JIBC** is the institute destination for roughly equal shares of mobile students from TIUs (31%) and B.C. colleges (30%), and a smaller share from RIUs (23%) and other institutes (20%), primarily BCIT.
 - **NVIT** takes in the majority of its mobile students from TIUs (45%), which is primarily TRU, as well as B.C. colleges (37%), RIUs (15%) and other institutes (12%).
- Students may complete a credential at their previous institution before moving to an institute. Mobile students who moved from an RIU to BCIT or JIBC were much more likely at 43% to have first completed a credential at the RIU before moving to the destination institute, compared to mobile students from TIUs (21%), B.C. colleges (14%) or other institutes (14%). Most of these mobile students enrolled in a non-

- credential program at BCIT or JIBC.
- All mobile students to BCIT and JIBC were twice as likely to enrol in non-credential institute programs, such as “other” or “none”, as opposed to certificates and diploma programs.
- Student mobility between JIBC and BCIT is a common pathway for students, with slightly more students going from BCIT to JIBC (1,143) than JIBC to BCIT (907) in 2015/2016.
- The primary sources of mobile students to each of the three B.C. institutes vary by institution. The top five sources of students, by institution are:

- To BCIT: From Langara (12%), UBCV (12%), Douglas College (11%), KPU (10%) and SFU (9%).
- To JIBC: From BCIT (20%), TRU (10%), SFU (8%), UBCV (7%) and Douglas (6%).
- To NVIT: From TRU (31%), NWCC (10%), Okanagan College (7%), VIU (6%) and Douglas (5%).
- Program pathways between institutions may be a factor in the mobility of students from other institutions to institutes. See **Figure 9** for the popular program pathways among the top five institution sources of mobile students to institutes in B.C.

Figure 9: Popular Program Pathways to B.C. Institutes in 2015/2016

Origin Institution	Destination Institute	Origin Program(s)	Destination Program(s)
Langara	→ BCIT	Arts	→ Bus, Eng
		Bus	→ Bus
		Hlth	→ Hlth
UBCV	→ BCIT	Arts	→ Eng, Bus
		Eng	→ Eng
		Hlth	→ Hlth
DOUG	→ BCIT	Hlth	→ Hlth
		Arts	→ Eng, Bus, Trades
KPU	→ BCIT	Trades	→ Trades
		Bus	→ Bus
		Hlth	→ Hlth
SFU	→ BCIT	Arts	→ Bus, Eng, Hlth
		Eng	→ Eng
JIBC	→ BCIT	HSS	→ Trades, Eng, BUS
BCIT	→ JIBC	Trades, Eng, Bus	→ HSS
TRU	→ JIBC	Arts, HSS, Bus	→ HSS, Hlth
SFU	→ JIBC	Arts	→ HSS
UBCV	→ JIBC	Arts, Eng	→ HSS
DOUG	→ JIBC	Arts	→ HSS
TRU	→ NVIT	Arts, Dev	→ Arts, Dev
NWCC	→ NVIT	Trades, Dev	→ Dev
JIBC	→ NVIT	Arts	→ Arts

Program Abbreviations: Arts=Arts and Sciences, Bus=Business and Management, Dev=Developmental, Eng=Engineering and Applied Sciences, Hlth=Health, HSS=Human and Social Services.

11. Mobile students can move to multiple destinations in the academic year, either simultaneously or sequentially, thus the sum of percentages may exceed 100% across all destinations.

Student Mobility Between Regions of B.C.

Figure 10: Student Mobility Between Institutions and Regions in the B.C. Public Post-Secondary System (2014/15)¹²

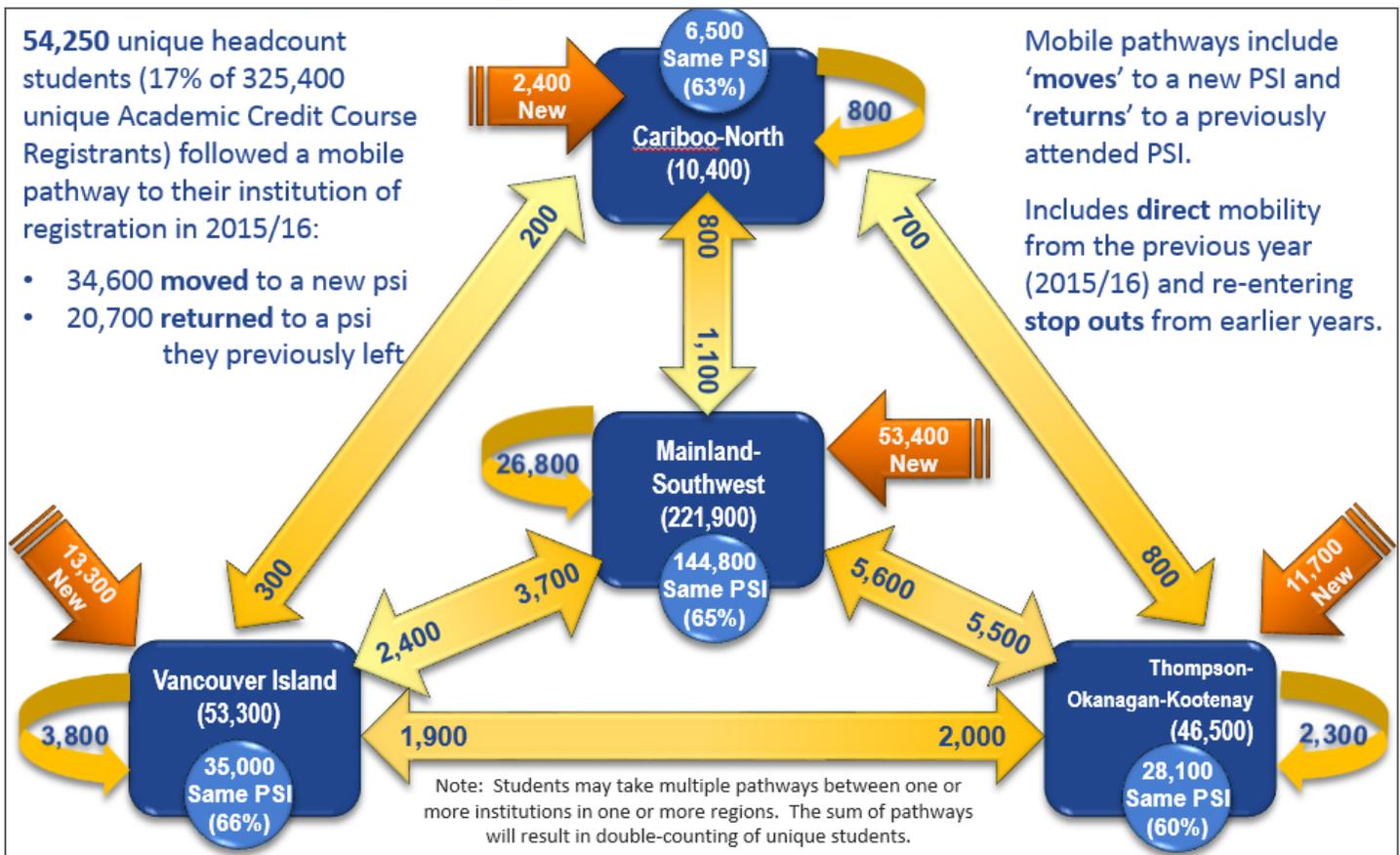


Figure 11: Matrix of Student Mobility Between Regions (2015/16)

Fr Region	To Region			
	MSW	TOK	VIS	CNO
MSW	26,800	5,500	2,400	800
TOK	5,600	2,300	1,900	700
VIS	3,700	2,000	3,800	200
CNO	1,100	800	300	800

B.C. Public Post-Secondary Institutions by Region

B.C. public post-secondary institutions are located in urban and rural regions of the province. For the purpose of tracking the mobility of students around the province, the STP has assigned each of the post-secondary institutions to one of the following four geographic regions.

Cariboo-North Region (CNO) – College of New Caledonia, Northern Lights College, Northwest Community College, University of Northern British Columbia.

Mainland-Southwest Region (MSW) – British Columbia Institute of Technology, Capilano University, Douglas College, Emily Carr University of Art + Design, Justice Institute of B.C., Kwantlen Polytechnic University, Langara College, Simon Fraser University, University of British Columbia, University of the Fraser Valley, Vancouver Community College.

Thompson-Okanagan-Kootenay Region (TOK) – College of the Rockies, Nicola Valley Institute of Technology, Okanagan College, Thompson Rivers University, Selkirk College, University of British Columbia (Okanagan).

Vancouver Island Region (VIS) – Camosun College, North Island College, Royal Roads University, University of Victoria, Vancouver Island University.

12. [Regional mobility diagrams](#) are also available on the public [STP web site](#).

Mobile Students Within the Same Region

Within-region student mobility occurs when students switch from one institution to another, but remain in the same region of B.C. The STP divides the province into four large regions for this purpose: Mainland/Southwest (MSW), Vancouver Island (VIS), Thompson-Okanagan-Kootenays (TOK) and Cariboo-North (CNO).

The majority (63%) of student mobility occurs within the same region, as opposed to 37% that occurs between regions. Since the Mainland/Southwest region of B.C. contains most of B.C.’s post-secondary students and institutions, it is not surprising that the majority of within-region student mobility also takes place here (see **Figure 11**).

When we examine the specific institutions where student mobility within the same region occurs, it is

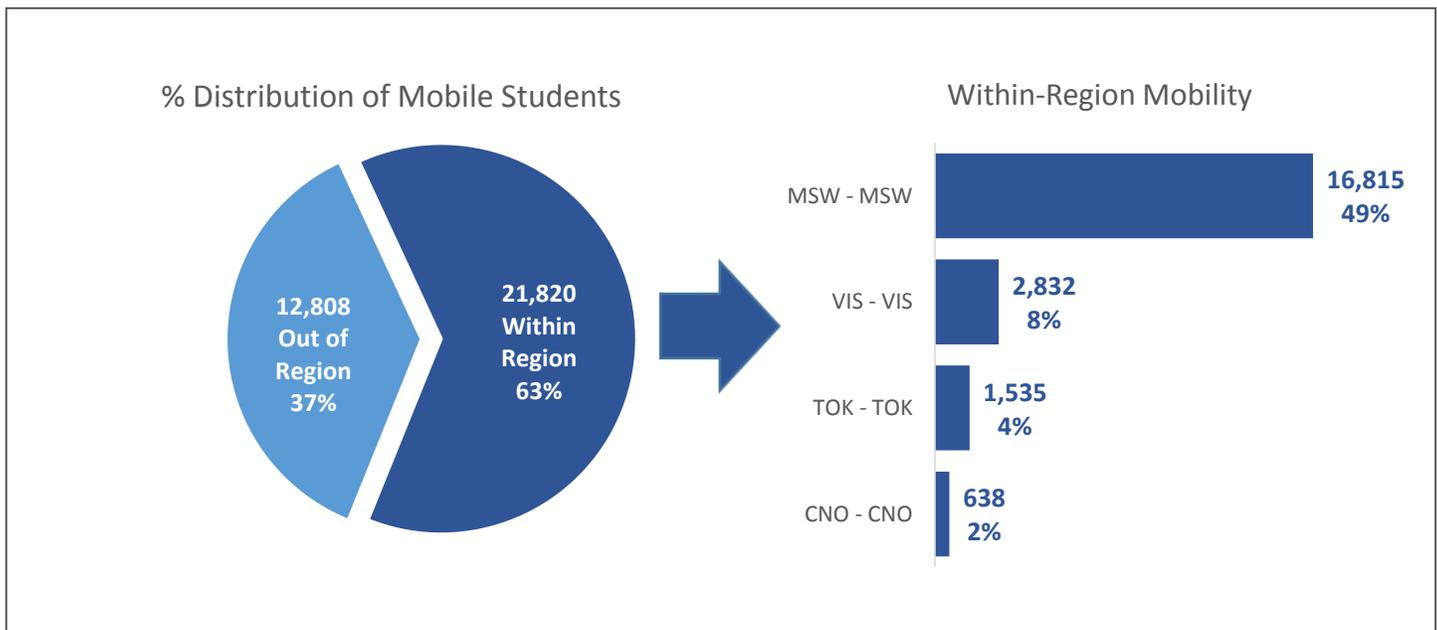
evident that the majority of the within region student mobility is attributed to students moving between just two or three institutions within those regions.

- Within the **Cariboo-North** region, 79% of the student mobility is attributed to students moving within the city of Prince George, between College of New Caledonia (CNC) and the University of Northern British Columbia (UNBC). Given the traditional transfer route from college to university, it is interesting to note that roughly twice as many students move from CNC to UNBC than move from the university to the college.
- Within the **Vancouver Island** region, 67% of the student mobility occurs when students move within the city of Victoria between Camosun College and the University of Victoria.

Roughly 2.6 times as many students move from Camosun College to UVic than UVic to Camosun.

- Within the **Thompson-Okanagan-Kootenays**, 73% of the student mobility within the region occurs between three institutions: Okanagan College, UBCO and TRU. The largest volume of students within this cluster move from Okanagan College to UBCO at 2.5 times the rate of students moving in the opposite direction.
- It is only within the **Mainland/Southwest** where the share of within region student mobility is spread more widely across all of the institutions in the area, although it is evident that BCIT, UBCV and SFU are popular points of origin or destination among mobile students within the region.

Figure 12: Within-Region Student Mobility, 2014/2015 to 2015/2016 (N=34,628)



Mobile Students Within the Same Institution Type

Within-sector student mobility occurs when students switch from one institution to another, but remain in the same sector or institution type in B.C.

The province of B.C. has four post-secondary institution types: B.C. Colleges (BCCOL), Institutes (INST), Teaching-Intensive Universities (TIUs) and Research-Intensive Universities (RIUs). The majority (78%) of student mobility occurs when students move from one institution type to another and therefore, only 22% of student mobility occurs within the same sector or institution type.

The most popular within-sector student mobility is TIU to TIU (7%) and BCCOL to BCCOL (7%) (see **Figure 13**).

Mobile Students Between Different Institution Types

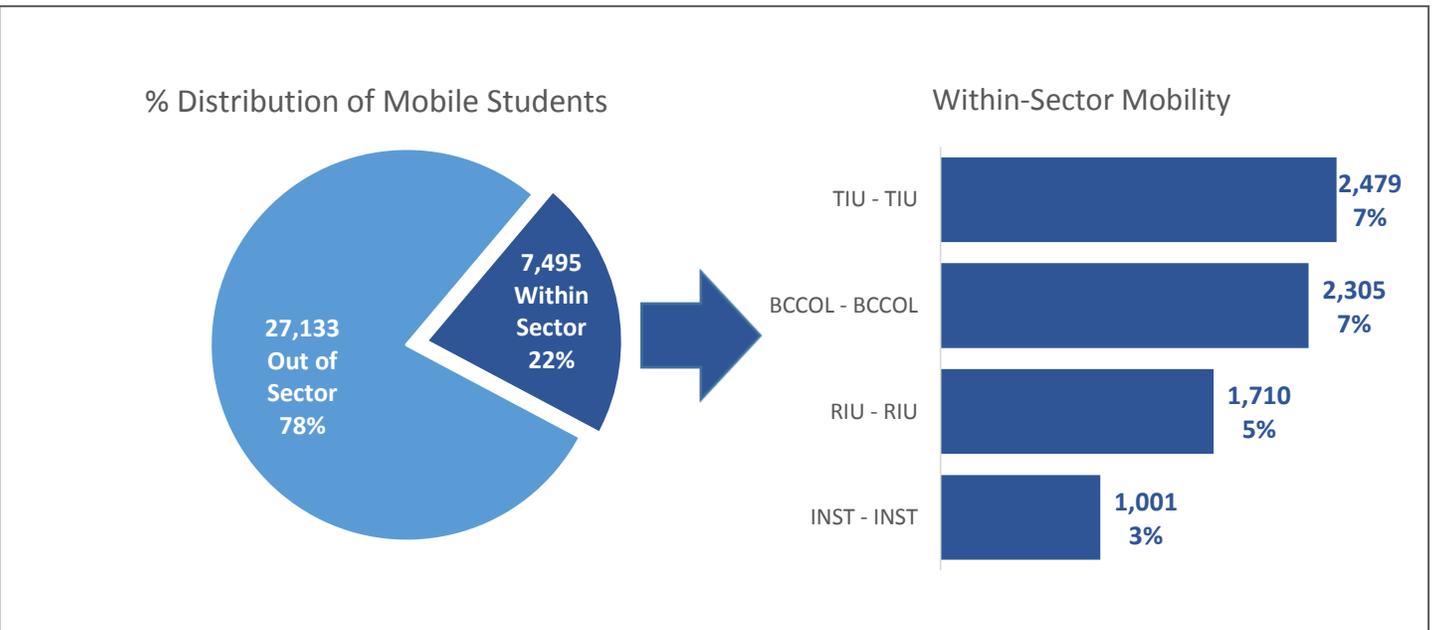
Given that the vast majority (78%) of student mobility is out of sector student mobility (occurring when students move from one institution type to another), what are the most common pathways that students take between different sectors? The following four pathways between different institution types account for more than half of the out of sector student mobility.

- B.C. College to RIU (16%).
- TIU to RIU (11%)
- B.C. College to TIU (10%).
- B.C. College to Institute (9%).

While the movement of students from B.C. Colleges to RIUs is the traditional transfer student pathway, it is interesting to note that almost as many students move from a Teaching- (many of which are former colleges) to an RIU.



Figure 13: Within-Sector Student Mobility, 2014/2015 to 2015/2016 (N=34,628)



Student Pathways Diagrams

The Student Transitions Project depicts the routes students take over a multi-year period in a series of Pathways Diagrams provided on the [Student Transitions Project](#) web site. These diagrams are available for each of B.C.'s 25 post-secondary institutions, each of the four regions and four sectors of B.C., and for the B.C. System overall (see [Figure 14](#)). For more information and interpretation of these pathways diagrams, please refer to the [Definitions](#) on this page.



Definitions:

Student mobility is the movement of students (specifically registrants in post-secondary credit courses) from one B.C. public post-secondary institution to another.

Students take a variety of routes or **pathways** between institutions over time. When a student switches institutions, the student takes a **mobile student pathway**, otherwise the student takes a **non-mobile student pathway**.

The **student mobility rate** is the proportion of students who took a mobile pathway to their registration in a given year, expressed as a percentage of all students registered in that year.

Mobile Student Pathways: Depending on the timing and type of mobility, four different mobile pathways are possible.

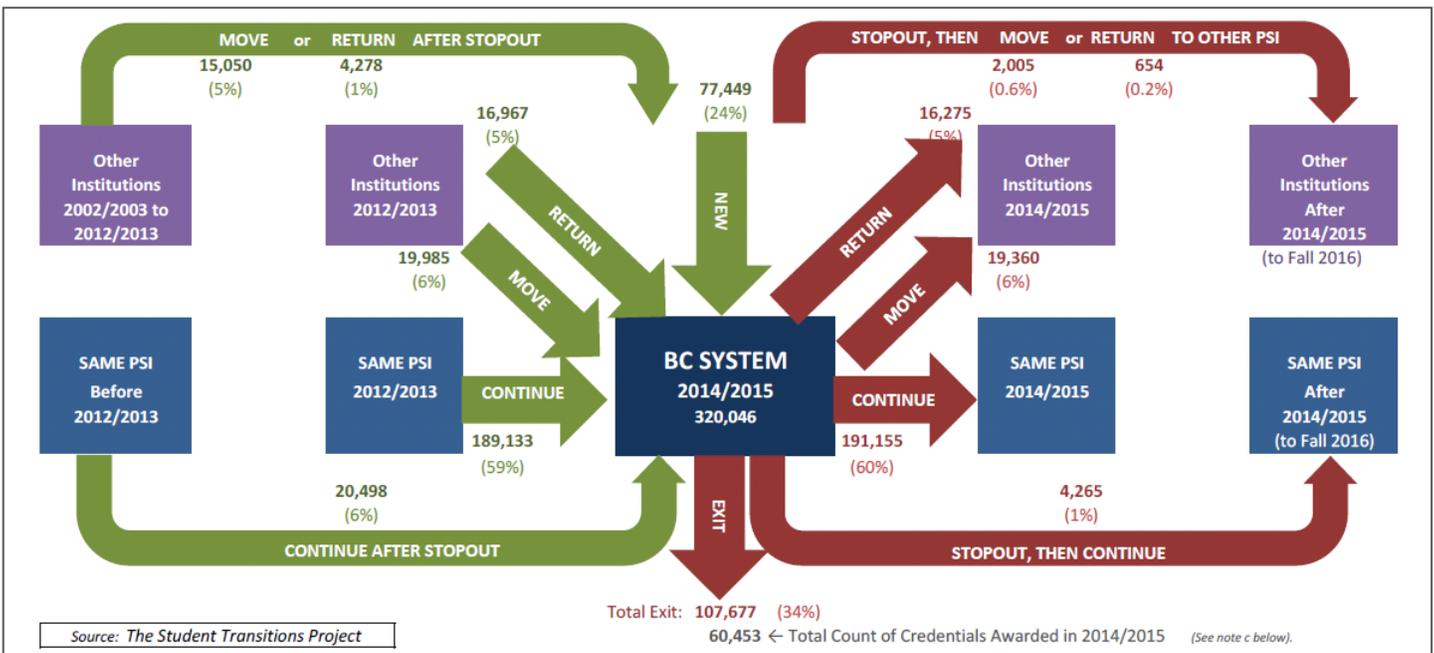
- a) **Move** – Switch institutions by moving to an institution never attended before
- b) **Stopout Move** – Switch institutions by moving to an institution never attended before, but after a stop out period of non-registration.

- c) **Return** – Switch institutions by returning to an institution previously attended
- d) **Stopout Return** - Switch institutions by returning to an institution previously attended, but after a stop out period of non-registration.

Non-Mobile Student Pathways: When students do not switch institutions, there are four other pathways they might have taken (or will take in the future).

- a) **New to STP** – New student to the STP with no previous record of registration (back to 2002/03) in any institution in the B.C. public post-secondary system.
- b) **Exit STP** – Left the B.C. public post-secondary system. There are no further record(s) of registration in the B.C. public post-secondary education system beyond this point in time (up to Fall 2011).
- c) **Continue** – Continue registration at the institution last attended in the previous time period.
- d) **Stopout Continue** – Continue at the institution last attended, but after a stop out period of non-registration. No other institutions were attended in the intervening period.

Figure 14: Student Pathways in the B.C. Public Post-Secondary Education System



Following Student Flows Over a Multi-Year Period

Students in the B.C. public post-secondary system flow in and out of various states of registration and non-registration over time. As shown in the 3-Year Registration State Sankey diagram¹³ for 2013/2014 to 2015/2016, the dominant flow patterns between registration states are evident (see **Figure 15**):

A. Registered students who continue at the same institution as the previous year provide the dominant flow

pattern, representing about two-thirds of all registrants per year.

B. Non-registrants are also common, representing about one-third of the previous year’s headcount enrollment, as students exit or temporarily stop out of the education system.

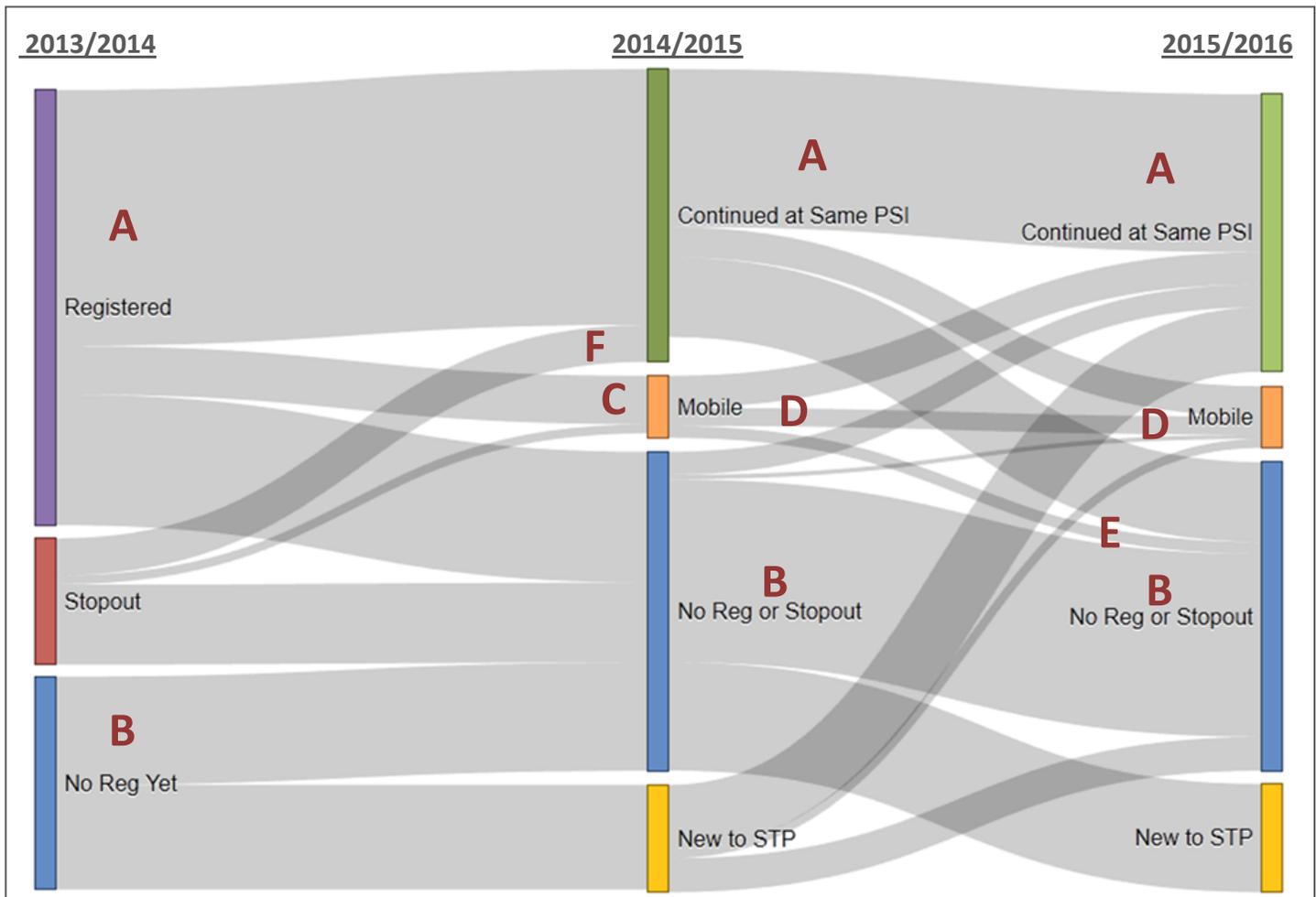
C. Mobile students who switch institutions represent a relatively small proportion (17%) of all student flows;

D. Roughly 30% of mobile students in 2014/2015 switched institutions again in 2015/2016 .

E. About 20% of the students who switched institutions in 2014/2015 were no longer registered in 2015/2016 .

F. More than one-third (36%) of students who stopped out returned in the following year, primarily at the same institution they last attended .

Figure 15: Student Flows Over a Multi-Year Period (2013/2014 to 2015/2016)



13. A Sankey diagram is a flow diagram in which the arrows are shown proportionally to the amount of flow. These diagrams are typically used to visualize the amount of flow between processes, but they are also useful for visualizing student flows.

Traditional Transfer Students

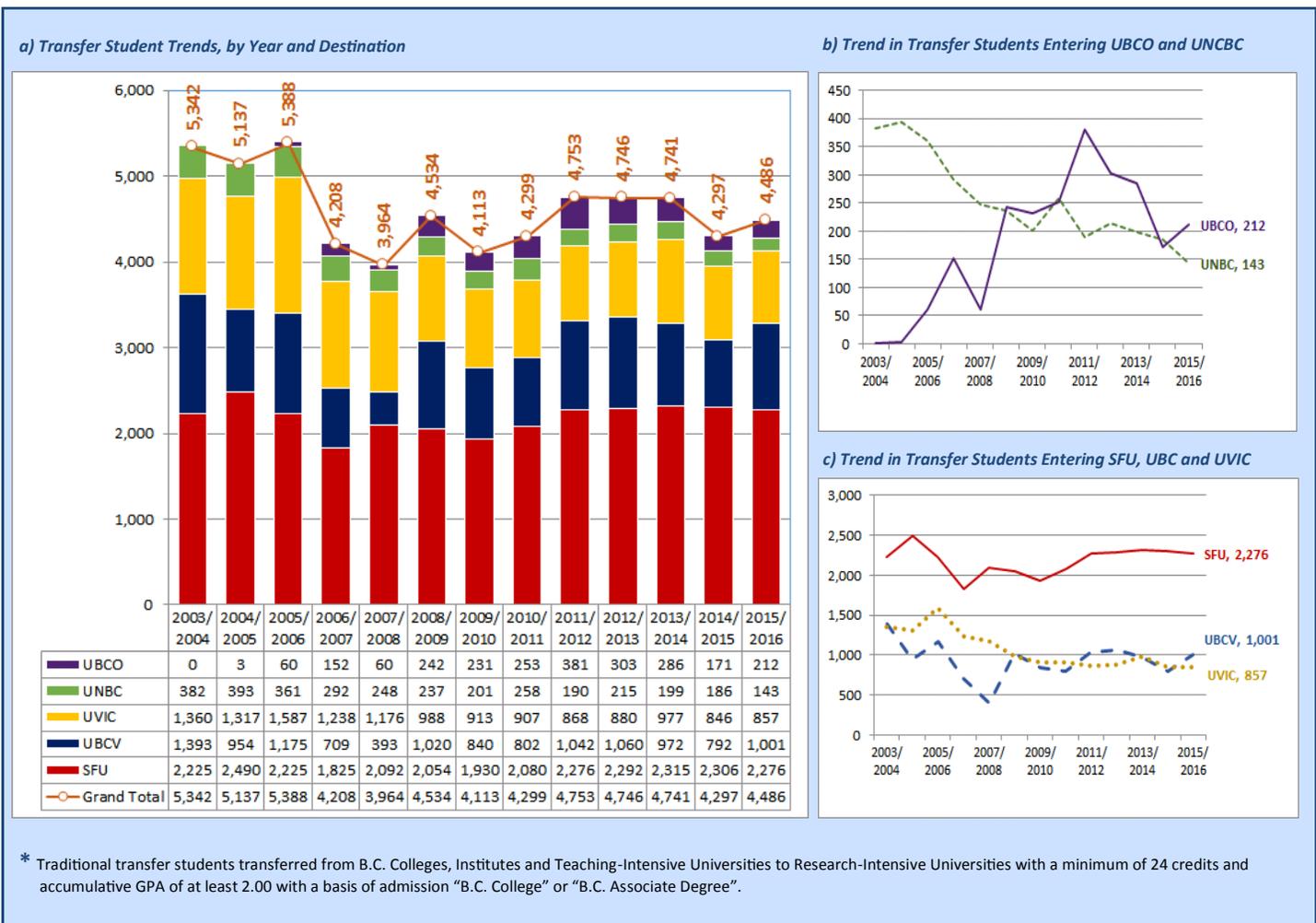
The B.C. college transfer system has become more widely understood as a student mobility system because the traditional transfer pathway¹⁴ from a B.C. college or institute to a B.C. research-intensive university is just one of the many routes that students

may take through B.C.’s post-secondary system towards earning a bachelor’s degree or other post-secondary credential or other personal education goals.

As shown in **Figure 16**, roughly 4,500 students took the traditional

transfer pathway to a B.C. research-intensive university in academic year 2015/2016, up 4% from 4,300 last year, but down from the 5,000 or more annual transfer volumes from over a decade ago¹⁵.

Figure 16: Number of Traditional Transfers Students* by Academic Year and Destination Research-Intensive University



14. "Transfer students" have traditionally been defined as students who transferred to a research-intensive university (RIU) from a B.C. college, institute or teaching-intensive university with a minimum of 24 credits and a cumulative GPA of at least 2.00 with a basis of admission of B.C. College or B.C. Associate Degree.

15. The basis of admission (BOA) category is used to identify traditional college transfer students entering BC research-intensive universities. The STP2015 data used in this analysis includes submissions to the STP from UBCV and UBCO with a greater share of BOA="other" and smaller share of BOA="BC College" than previously submitted for the same time period. Therefore, the total number of traditional transfer students reported here is lower than previously reported for the time period up to and including 2012/2013.

Trends in Mobile Students From Teaching-Intensive Universities

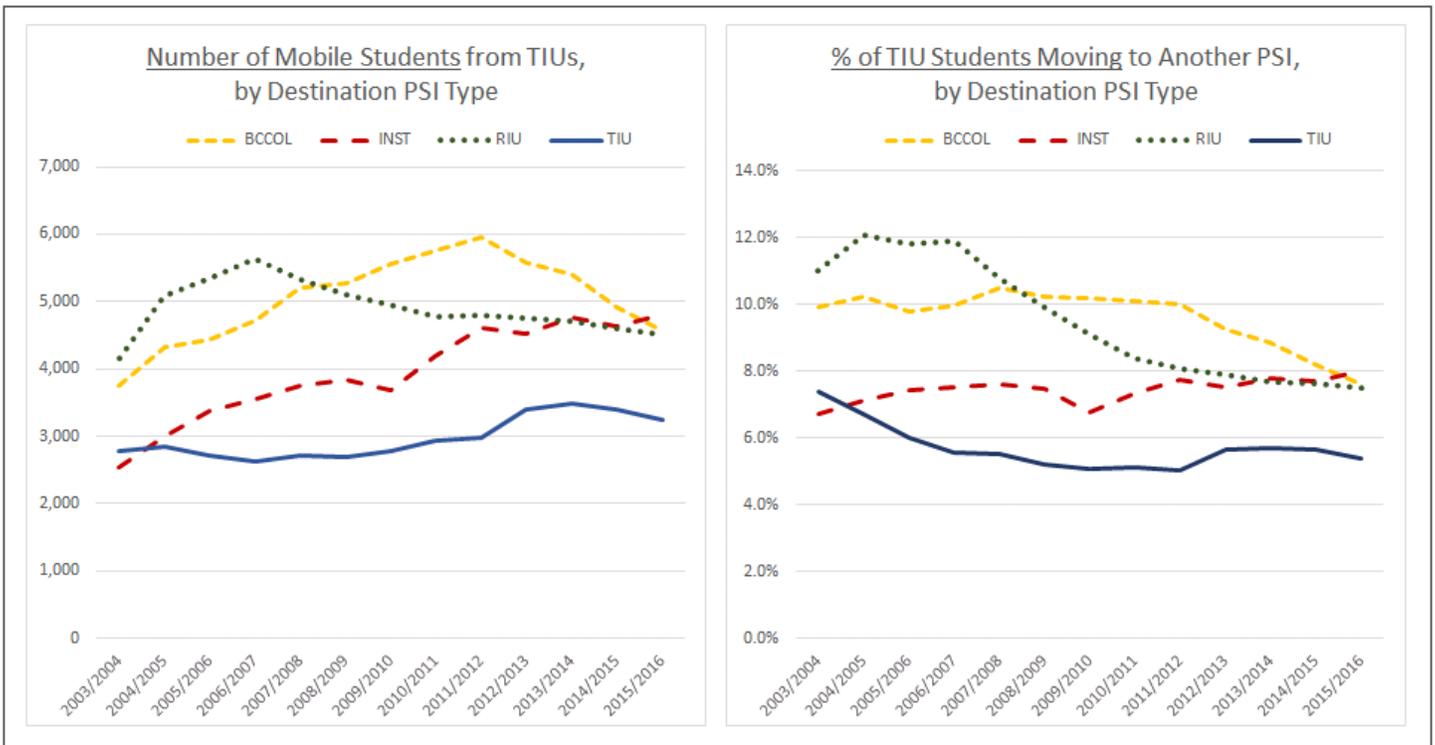
Numerous B.C. public post-secondary institutions became teaching-intensive universities several years ago, so there is a continued interest in understanding the impact these changes are having on student mobility in B.C.

As shown in **Figure 17**, the number of students switching from TIU's to RIU's has declined from a high of 5,600 students in 2006/2007 to the current level of about 4,500 students.

When expressed as a proportion of the total mobile and continuing students originating at TIUs, a more

significant decline is evident in the share of mobile students going from TIUs to RIUs, as compared to the share of mobile students going from TIUs to B.C. Colleges. This declining trend reflects the increasing tendency of students to remain at TIUs to complete their program, rather than transferring to RIUs.

Figure 17: Trend in Destinations of Mobile Students Leaving TIU's for Other Institutions



Teaching-Intensive Universities of British Columbia



Capilano University



Emily Carr University of Art + Design



Kwantlen Polytechnic University



Royal Roads University



Thompson Rivers University



University of the Fraser Valley



Vancouver Island University