Admissions Policies
and Practices for

Underrepresented
Groups of Students

Prepared for BCCAT by Paul Merner and Patricia Beatty-Guenter
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Executive Summary

This paper examines topics of equity and access to post-secondary education through exploration of barriers and other dimensions that serve to identify underrepresented groups in BC post-secondary education. The key purpose of the research project is to assess the policies and practices at the BC Transfer System institutions for admitting under-represented (equity) groups of students, as well as to summarize the data sources available on the underrepresented groups.

A review of the (largely Canadian) literature of the last 20-25 years explored the causes and correlates that restrict equity of access to post-secondary education. Specifically, do causes that appear to persist represent systemic barriers to access for individuals, or are other factors at play? Exploration of such barriers, their correlates, and the magnitudes of the participation gaps noted, led to distillation of identified groups, along with their key access determinates or barriers:

1. **Poverty:** Those from low income, or socioeconomic status backgrounds, or facing financial barriers.

2. **Parental Education:** First generation post-secondary learners, or those with low parental education attainment.

3. **Preparation:** Those with low secondary school success, or who are underprepared for post-secondary study.

4. **Family:** Family or dependent responsibilities, non-traditional family structure; Former Youth in Care.

5. **Indigenous Identity:** Including First Nations (Status and Non-Status), Metis, and Inuit.

6. **Location:** Those from rural locations, or living some distance from post-secondary institutions.

7. **Gender:** Men or women in specific contexts, gender-based role barriers, or LGBTQ persons.

8. **Ability Limitation:** Those with a recognized disability, or other physical or cognitive constraint.

9. **Cultural Distinctiveness:** Recent immigration, minority ethnicity, or English language barriers.

> This paper examines topics of equity and access to post-secondary education through exploration of barriers and other dimensions that serve to identify underrepresented groups in BC post-secondary education.

These groups and their defining factors or barriers might be categorized in terms of: i) conditions an individual is born into; ii) conditions of situation; and iii) personal conditions. This is important because while some barriers may be amenable to change, others are not and must be addressed in other ways. It was also noted that while some groups are easily identified as such in the sociological sense (well-defined, self-aware, cohesive, visible, having voice) others seen as underrepresented are more categories of individuals, who may share common characteristics, but who lack most of the other elements that define a 'group'.

The literature review clearly revealed aspects and correlates of each groups' participation; and that barriers and participation are rarely singular, but often contextual and conditioned (e.g., ethnic or gender underrepresentation is specific to certain program areas or types of institution). The literature review identifies the magnitudes of participation overall, and in relation to each of the underrepresented groups.

The next section contains an analysis of policies and practices, which forms the main focus of the paper. This analysis initially involved scanning websites and other digital documentation for the thirty-eight institutions of the BC Transfer System, as well as provincial government webpages and other online material. A survey of the public institutional research offices (15 of 25 institutions responded), provided information on institutional data collection practices and the identification of underrepresented groups by each. The final stage of information gathering involved interviews of admissions and other personnel from a sample of seven representative institutions to garner first-hand information about equity initiatives and access practices in an operational context.

Typically, post-secondary institutions have responded to access and equity issues in three main ways:

1. *Programmatically* - by creating new or expanded programming, or sequestering capacity within existing programming, to meet the needs of underserved populations;

2. *Through services* - that identify and out-reach to, or otherwise seek to enhance access by and engagement of, those populations; and

3. *Through policy and practices* - that provide both the framework for and practical implementation of measures that also facilitate participation of underserved groups.

Although the central focus of this study is the latter category of policy and practice, we found that in many cases institutional responses were multi-faceted, and it was also often difficult to delineate boundaries across relatively seamless processes. We thus at times included non-admissions practices and services, and even programming in our examples, where these served to illustrate an institutional response as a whole (e.g., the service sequence for an underprepared learner, or for an individual with a language barrier).

Policy development is uneven, across institutions and in relation to the various groups themselves. The strongest policy statements were found with respect to the more visible and defined groups (e.g., Indigenous people and those with ability limitations). These are also areas where government mandates and legal frameworks are strong, and also true of law and policy in relation to immigration and citizenship. Sometimes policies are present but are of a general nature; that is not aimed specifically at access or participation of a particular group, and reflecting the open access nature of many institutions. For instance, all institutions have policy governing admissions requirements, but few have policies that reference a particular group of applicants. In other respects, such as with first-generation learners or those from rural origins, policy was almost entirely absent. This served to underline the differences in visibility among the underrepresented groups.

TABLE 1: Attributes (Data Elements) Identifying Underrepresented Groups, by Data Source*

Attribute	CANSIM (PSIS, RAIS)	CANSIM (Census of Canada, GSS, LFS)	CANSIM (ASETS, NGS)	CAUT	BC Student Transitions Project (including CDW)	BC Student Outcomes Surveys (AP-PSO, BGS, DACSO)	Other Student Surveys (e.g., BC-SSE, CUSC, NSSE, UCAS)
Low income / SES	Y (student loan in RAIS)	Y	Y (student loan)			Y (student loan, sources of funds)	Y
1st generation learner / parental education			Y				Y
Underprepared / low HS success / engagement					Y (BC students)	Y (ABE courses)	Y (self-report letter grades)
Delayed / mature entrants / adult learners	Y (age)	Y	Y (age)		Y (age)	Y (age)	Y (non-traditional >21)
Family structure / dependents		Y	Y				Y
Women or Men	Y	Y	Y	Y	Y	Y	Y
Rural origins		Y (e.g., census subdivision)			Y (region, postal code)	Y (high school)	Y (distance education)
Disability				Y	Y (BC students)	Y	Y
Indigenous / Aboriginal Identity		Y	Y	Y	Y	Y	Y
Ethnic minority / Visible minority	Y (country of citizenship)			Y	Y (country of citizenship)	Y (country of origin)	Y
Minority language		Y	Y		Y (BC students)	Y (learned ESL)	Y
Immigrant 1st or 2nd generation		Y				Y (immigration status)	Y
Employment / dislocated workers		Y				Y (sources of funds)	Y (employment)

* Historical surveys have also provided data for some of the significant studies cited in this paper. PEPS (last collection 2008) is subsumed under ASETS. YITS (last collection 2010) contains all of the group attributes noted above and is national and longitudinal in scope. SLS/F (collected 1991 and 1995) also contains the full range of group attributes and would provide an historical perspective if desired. Researchers seeking access to archived data sets are directed to Statistics Canada Library Services[1].

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[1] https://www.statcan.gc.ca/eng/library/index?MM=as

A common appearance in policy statements was found in most of the public institutions. This was a 'Diversity' or 'Non-Discrimination' policy speaking to inclusiveness, cultural and other diversity, non-discrimination, equity of access, and sometimes "breaking down barriers to services". While the language of underrepresentation is not present, these policies constitute strong statements in favour of access, inclusion and equality, and are made by most public institutions in BC.

As with policy, some underrepresented groups are well supported by admissions practices designed specifically to support their needs, while other groups less so, or not at all. This is not to say that individuals are not supported during admissions processes, but that they may simply be subsumed in the general population, and are subject to the general recruitment, admissions and registration practices of the institution.

Prospective and current Indigenous students benefit from the broadest and most holistic set of targeted practices, found at virtually every public institution. These usually include a wide range of supports such as outreach, targeted admissions, assessment, course selection etc., provided in a culturally sensitive environment. Other groups served through specialized processes and services include those with an ability limitation (particularly designated persons with disabilities - PWD), the underprepared learner (through assessment and triage practices) and those with a language barrier.

Other groups may benefit from specific practices, but which are not overtly 'admissions' related, such as financial aid services for those with financial barriers; or childcare services for parent students; or distance learning services for those in rural locations. In still other cases, practices or services designed specifically for the group are largely non-existent, but individuals are served through general policies and processes. Here we reference the first-generation learner, or those from minority ethnic backgrounds. Again, this is not to say the individual is not served, but simply that practices are not targeted specifically towards them, by dint of group membership.

The conclusion identified areas where policy and practice support particular underrepresented groups, and also where this is less directly so. By and large and over time, despite policy short-comings, and some blind-spots, access has improved and continues to do so. Real, measurable improvement in access to post-secondary education for groups such as women, ethnic minority and immigrant peoples, and indeed Indigenous peoples, is evident. We also note that often a gap continues to exist, and therefor aver efforts to narrow and close it, for all underrepresented groups.

Lastly, we will illuminate the availability of data sources that support current and future research on underrepresented groups. These include the many past and current Statistics Canada sources including the Census, and other data sets and surveys available through CANSIM, such as PSIS, NGS and the LFS. There are also discontinued but still available Statistics Canada surveys such as YITS, PEPS and SLS/F, and the CAUT publication which is also national in scale. Provincial / Institutional data sets include the CDW and STP, and the BC Outcomes Surveys, and Institutional / Consortia data sets such as CUSC, NSSE and UCAS (Table 1).

Introduction

Increasing access to post-secondary education is one of the main goals of the BC Transfer System, and indeed, access and equity have been guiding principles of the BC Post-Secondary Education system since its inception and throughout its development.

If then there remain groups within the post-secondary system who are underrepresented in relation to their population proportions, might this be said to represent a shortcoming of the system itself? Or if we are to argue to the contrary, it would seem that we must also look for the causes and correlates that restrict equity. Do causes that are seen to persist represent systemic barriers to access for individuals or groups, or do other factors such as values, preference, and choice enter in?

In exploring these questions, we are certainly not alone, and a large proportion of the research activity in the post-secondary domain over the last 50 years has focused on one aspect or another of access, equity, and representation, together with the enablers and barriers that have conditioned them.

The specific purpose of this study is to assess the policies and practices in the BC Transfer System institutions for admitting underrepresented (equity) groups of students.

To accomplish this purpose, we must first understand who these groups may be, and for this we turn for guidance to the large body of research and policy that exists provincially, nationally, and elsewhere:

- What have the research and policy initiatives taught us about underrepresented groups?
- What is the magnitude and significance of any gaps or underrepresentation? and
- What is the nature of the specific barrier(s) or other factors that pertain to each?

Once a potential set of underrepresented groups are identified, we conduct an extensive analysis of the admissions policies and practices of BC Transfer System institutions to determine if and how such groups are served. As we do this, we take a brief look at the extent to which they are addressed through broader services, programming, or initiatives.

Lastly, we will illuminate the availability of data from institutional, provincial and national sources that support current and future research on underrepresented groups.

From its start with the University of British Columbia (UBC)[2] and a few faith-based institutions, growth and evolution of post-secondary education in BC mirrors the growth and diversity of the province itself. This was especially true of its expansion and diversification between 1960 and 1980, when the University of Victoria and Simon Fraser University, British Columbia Institute of Technology (BCIT) and community colleges were established, and Nicola Valley Institute of Technology (NVIT) was mandated to serve the Indigenous population. This expansion represented a regionalization of the system, bringing educational benefits closer to learners and workplaces and at the same time a democratizing movement, providing access and individual growth opportunities for those otherwise unable or unqualified to participate.

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[2] Appendix 1 contains the list of abbreviations for institutional names.

The most recent expansion has been the creation of the University of Northern British Columbia (UNBC), and seven teaching universities. Accompanying these developments was the proliferation of private sector and special purpose institutions such as IAHLA (The Indigenous Adult and Higher Learning Association), addressing important niche or population needs. Again, we saw the expansion of higher education opportunities in the regions, but also now a concomitant emphasis on transfer and mobility.

This paper proceeds by identifying the key data sources that provide information and shed insight on patterns of underrepresentation. Data at the national, provincial and local level identify qualities and identities considered important to those who collect such information.

A model to advance our understanding of underrepresented students is then created by distilling information gathered from the research literature, and the perspectives of those interviewed for this project[3]. This model is informed by data collected from BC Transfer System institutions, through website research following a rubric for policy documents, services, practices and related institutional information. Nine attributes that could reveal conditions of restricted access or equity to post-secondary education are identified, and then used as a framework to discuss current access or equity initiatives in BC.

Data Sources and Availability

Background

What data are collected, by whom, and the extent of external access are all aspects of data availability. As we will see, some of the elements in relation to underrepresented students are more readily available than others. Data elements and data access are governed by policies of the body responsible and conditioned by the social norms of the day. So, for instance, routine collection of information about sexual, ethnic or racial identity has not historically been considered appropriate by post-secondary institutions in Canada. At the other end of this continuum however, both age and binary gender are everywhere collected and widely reported.

Sensitivity to language is a consideration of a study such as this. There are words used by the organizations that collect the data, and there are words that evolve to become more inclusive, more sensitive to others, and more socially responsive. In assembling the literature on this topic, it is difficult to accurately report while maintaining a current sensitivity to labels and labelling. There are those who object to the very words 'underrepresented' or 'underserved' as marginalizing or diminishing (e.g., Ukaegbu, 2017). However, while we respect those views, we have in this case chosen to remain with the commonly accepted terms, and their use is not intentionally pejorative.

When a document, study, or data element cited uses 'Aboriginal', we will use that term, while we choose to otherwise use the currently more sensitive 'Indigenous'. Similarly, we will reference binary gender terms 'women' and 'men' but will use the labels 'female' and 'male' when employed in a cited study. As well, the term 'disabled' is very widely used in the literature, surveys, government programs, and elsewhere, and there seems to be no widely accepted alternative. We use both 'disability' and 'ability limitation' in this study, recognizing that both are imperfect choices but

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[3] See Appendix 1 for list of participating institutions.

reflective of common usage. Lastly in this context, while some are moving away from the identifiers 'Youth in Care' and 'Former Youth in Care', it appears that the large majority of organizations continue to use these terms, with no consensus evident regarding an alternative. We have therefor kept to the current most common usage, again with no pejorative intent.

A great deal more data are collected, at least by institutions, than are externally reported. That which is reported internally (within an institution or to a coordinating body) need not necessarily be available publicly. Also, there have been some data sets and regular information releases in the past in Canada that are no longer maintained (although in many cases the data themselves are available on request). Referenced data sets that have been replaced by other data collection processes are noted and ties to the literature review identified. Appendix 2 describes available data sets for research purposes, while key sources are identified below for readers' convenience.

Summary Sources

The following five sources provide summaries of data sets and other material pertinent to the study of representation and equity group participation in post-secondary education in Canada.

1. Intended as a living document, scholars in a graduate education course (EDUC 950) under the supervision of Dr. Michelle Nilson at Simon Fraser University, have published a *Compendium of Canadian Postsecondary Education Data Sources* (Nilson & Rexe, 2015).

2. A dynamic link at the University of Saskatchewan is intended to assist graduate students doing research in Education (University of Saskatchewan, n.d.). The page provides links to the key national data projects plus a side bar with recent statistical releases.

3. As the title suggests, *Statistics Canada's education-related data sources with Aboriginal identifiers* (Statistics Canada, 2015b) is keyed towards data sets that have some level of Aboriginal content. The document pro- vides summaries of nineteen sources containing information pertinent to those studying educational equity and access to post-secondary education in general. Data sets are divided into those currently active, versus discontinued, and useful summaries describe the general purpose of each with a short synopsis of content.

4. Post-Secondary Education in Canada 2008-2009 Canadian Council on Learning (CCL, 2009) - A chapter on underrepresented learners in post-secondary education in Canada discusses under-representation and gen- der disparities, offering context and insights on these topics. Tables cover some of the best available represen- tation data from Statistics Canada, including factors of family income and parental education.

5. Canada's Post-Secondary Education Performance: An International Comparison (Lalonde & McKean, 2017) - This Conference Board of Canada report includes data identifying participation in education by parental edu- cation background in comparison with 15-member countries of the Organization for Economic Co-operation and Development.

Opportunities for researchers to download or manipulate data to focus specifically on variables relevant to this report are quite varied. There are key data sources that are current and provide information about post-secondary partici- pation and attainment, and there are a few inactive sources that provided information about post-secondary access. Together they provide current and historical indicators about access and equity that inform the model developed in this paper, and they reflect the outcomes of those processes in terms of enrolments and educational attainment.

National Data

Census of Canada – The 2016 Census releases to date include Education Highlights (Canada 2017a) and include information on Aboriginal identity, binary gender, family status, and immigration status. In November 2017, Education in Canada: Key Results from the 2016 Census was released (Statistics Canada, 2017b).

Canadian Socio-Economic Information and Management System **(CANSIM)** – The CANSIM is Statistics Canada's central socio-economic database, containing multiple data sets that include dimensions of education and demographics. This product makes tables and data information available from the following national data collection processes:

- Postsecondary Student Information System **(PSIS)** formerly Enhanced Student Information System (ESIS) and Community College Student Survey (CCSS). PSIS is a national survey that enables Statistics Canada to provide detailed information on enrolments and graduates of Canadian postsecondary education institutions. A recent Statistics Canada data release is Table 477-0029, which reports Canada's post-secondary students in terms of binary gender and the primary groupings of the Classification of Instructional Programs. This table allows analysis of gender imbalance in program areas. Tables from PSIS can be manipulated (e.g., selected for specific provinces and years) and downloaded.

- Registered Apprenticeship Information System **(RAIS)** – Ongoing information about individuals taking in-class or on-the-job training as apprentices in a trades training program. RAIS enables study of trades training participation by gender and other variables.

- National Graduates Survey **(NGS)** - The 2003 release encompasses the class of 2009/2010, three years after graduation from public and private post-secondary institutions from degree, diploma and certificate programs (excluding trades/apprenticeships), with demographic data, student loan information, aboriginal identify, parental education, language spoken at home, and dependent children.

- General Social Survey **(GSS)** - Although not an educational survey per se, the GSS does provide data pertinent to some of the groups discussed below, including selected characteristics, and some data on educational context. It is cited in some of the studies reviewed below, and so referenced here.

- Post-Secondary Education Participation Survey **(PEPS)** – A 1982 supplement to the Statistics Canada Labour Force Survey (LFS) identified the extent to which residents of Canada had participated in post-secondary education, as well as reasons for non-participation. Cited by studies reviewed in this paper.

- Survey of Labour and Income Dynamics **(SLID)** – discontinued survey that is widely cited in studies of family, education and work, and used by a number of studies in this paper.

- Access and Support to Education and Training Survey **(ASETS)** – This 2008 study includes data on antecedents and determinants to access to post-secondary education, with 3,058 respondents from BC. The ASET survey of 2008 brought together three previous surveys that include the role of student financing and participation in adult education and training. ASETS replaced the Survey of Approaches to Educational Planning (SAEP), the Postsecondary Education Participation Survey (PEPS), and the Adult Education and Training Survey (AETS).

- Youth in Transition Survey **(YITS)** – There is no other Canadian data set that has been as important to the study of underrepresented groups and barriers to education as the Youth in Transition Survey. A discontinued but important longitudinal survey from 1999 to 2010, a series of reports written from the YITS are frequently cited in studies about post-secondary participation. A similar survey in 1991 and 1995 was the School Leavers Survey **(SLS)**.

British Columbia Data and Reports

There are three key BC data collection projects; each has a different focus and makes results available through different processes and to different extents. Each has a cooperative development process that has institutions, agencies and government working collaboratively to pursue important research and reporting questions. Some data on these topics are not publicly available; but may be accessed by request for research purposes. Each of the three main projects has protocols to request data files or tables to gain time limited access to data for research projects.

- **BC Student Outcomes:** BC Stats annually collects Student Outcomes data on behalf of all public post-secondary institutions to explore student satisfaction, transfer, and employment outcomes after leaving programs of study. There are three main surveys, and baccalaureate graduates **(BGS)**, certificate and diploma graduates **(DACSO)** and former apprentice students **(APPSO)** are asked slightly different, but commonly relevant questions.[4] Half of all former students respond to surveys, with results used to inform government and institutions about many aspects of student success. Data are managed by BC Stats: http://outcomes.bcstats.gov.bc.ca/Default/Home.aspx.

  The surveys collect demographic data and have a section of equity questions. Variables regularly included in these surveys include gender and age, Aboriginal identity, long-term physical or mental health condition, country of origin, and immigration status. Information about how students financed their post-secondary education is also collected, and occasionally the subject of a special report. Immigration status and Aboriginal identity are regularly reported as key variables in papers, info-graphics and reports. Interactive reporting templates and written publications highlight results relevant to this topic.

- **Student Transitions Project (STP):** The Student Transitions Project[5] links data about students in the BC public post-secondary education system, with information from their years in kindergarten to Grade 12. Regular reports and special studies provide a wealth of knowledge about the transitions of BC students into post-secondary education, and mobility between institutions. Variables of interest to the study of underrepresented groups include gender, age, Aboriginal identity, high school non-completion, region, delayed entry, 'special needs', and primary language spoken at home.

  Regular releases from the STP include recurring reports about transitions and mobility as well as special topic reports that sometimes include aspects of underrepresented students, including non-graduates from high school and international students.

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[4] A fourth survey, the Developmental Student Outcomes Survey (DEVSO) was conducted from 2009 to 2014. The final report from this series (2014) includes findings about gender, age (28% aged 30 or over), family structure (almost 20% with children), having a high school diploma, region of residence, source of funds, and immigration status.

[5] https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education/data-research/student-transitions-project

- **Central Data Warehouse (CDW):** The Post-Secondary Central Data Warehouse contains standardized data relating to student demographics, programs, credentials, courses, session registration and campuses for 21 public post-secondary institutions in B.C. (all excepting four research universities). The data are updated in May and October of each year, and are managed and released through the BC Ministry of Advanced Education, Skills and Training.[6] Regular releases of standard reports show enrolments by program area, gender, Aboriginal identity, age category, credentials awarded, and international students.

Other Data and Studies

The *Paths on Life's Way* project is a key longitudinal survey in British Columbia that provides a detailed account of the lives, choices, and post-secondary education and work experiences of a provincially representative sample of individuals from the BC high school graduating class of 1988 over 22 years. This data set contains information on education, work and life course events at five points in time, including information on post-secondary education, employment, and happiness; together with personal background information and family constellation. The *Paths* project documents the nature of transitions and trajectories of a group of BC young people over a long period of time (Andres, 2012, p. 1).

The research universities in BC regularly populate a publicly available Excel spreadsheet at http://www.bcheadset.ca that contains similar data to that provided through the CDW. Gender, international students, high school location and Aboriginal identity are provided through pivot tables.

Survey Consortia

- The Canadian Association of University Teachers **(CAUT)** release a table of data 3.7 *University Undergraduate Students*, *Selected Equity-Seeking Groups*, through the Almanac[7]. The three included equity groups are "Aboriginal Persons", "Visible Minorities" and "Persons with Disabilities".

- Many BC public post-secondary institutions participate in more comprehensive student survey consortia, that support improvement efforts and comparisons with similar institutions across Canada and the United States. Data are generally available to members, providing measures of student engagement, financial and social supports, family circumstances, gender identity, age, citizenship, ethno-cultural information, and participation in distance education. These include the National Survey of Student Engagement **(NSSE)**, the Faculty Survey of Student Engagement **(FSSE)**, the Beginning College Survey of Student Engagement **(BCSSE)** and the Community College Survey of Student Engagement **(CCSSE)**. Some caution should be exercised with these data sets due to at times small sample sizes, however within their significance parameters they reflect the makeup of campus populations and are among our best and most current sources of such information.

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[6] Post-Secondary Central Data Warehouse. Accessed Dec 11, 2017 from https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education/data-research/post-secondary-central-data-warehouse

[7] Canadian Association of University Teachers (CAUT) Almanac. https://www.caut.ca/resources/almanac/3-students Accessed Dec 4, 2017.

- Academica's University/ College Applicant Survey **(UCAS)** provides data pertinent to underrepresented groups, including non-binary gender, parental education, mobility, financial resources, mother tongue, ethnicity, immigration information, marriage and family structure, disability, and Indigenous status among many other variables. Participating institutions can access historical and comparative data, and the master data set is available through arrangement with Academica.

- Canadian Undergraduate Survey Consortium's Survey of First-Year University Students, Survey of Undergraduate Students, and Graduating Student Survey **(CUSC)** is Canada's longest standing provider of undergraduate student satisfaction and experience surveys. These surveys of undergraduate students collect information on student expectations, motivations, and goals at different stages in their development and on a three-year cycle, with available information about student characteristics, identities and experiences.

By way of summary, Table 1 shows the key currently maintained data sources (or processes or entities), listing data attributes that separately or in combination identify underrepresented groups. These data are either reported through downloadable tables or made available to researchers through other defined data access procedures.

Literature Review

A basic mandate of BC's post-secondary system has been the provision of equitable access to higher education throughout the adult population. One important component of the development and elaboration of our system has been the various responses to the expressed needs of various underrepresented or disadvantaged groups within society. Historically, women, some religious groups, those with lower income, Indigenous peoples, those with ability challenges, and recent immigrants have made their needs and concerns known to government; and government has responded in a variety of ways to address inequities. In some areas underrepresentation has been reduced, and in other cases issues still remain. Thus, the existence and continuation of government programs, funding initiatives, and mandates at least in part serve to identify underrepresented groups. Financial Aid services; programs and services for people with disabilities; Aboriginal programming and Service Plans; "Women in Trades" programs; as well as ESL and citizenship programs serve, and serve to identify, underrepresented groups in the current context.

The major source of identification of underrepresented groups is the academic and other research-based literature; and in Canada we have a recent, rich, and lively such body to draw upon. Statistics Canada data, including the Census and a variety of national surveys, have provided rich data sets that have supported a considerable body of recent academic research on underrepresented groups and barriers to access. There are other data sources and excellent studies stemming from the universities and provincial agencies, including Colleges Ontario and the BC Council on Admissions and Transfer. Others over the last few decades, including those sponsored by organizations such as the Canada Millennium Scholarship Foundation, the Canadian Council on Learning, and the Conference Board of Canada, have served both to inform and support government and institutional initiatives, and to guide our thinking in important ways.

The American literature is both broad and deep, with both an academic and an evaluative stream. This literature touches on many or most of the groups identified in the Canadian context, but it is also heavily concerned with more uniquely American access issues (e.g., veterans and Black or Latino peoples). Extensive ERIC searches reveal a large portion of the research literature is also concerned with evaluation of government and non-profit-sponsored

TABLE 1: Attributes (Data Elements) Identifying Underrepresented Groups, by Data Source*

Attribute	CANSIM (PSIS, RAIS)	CANSIM (Census of Canada, GSS, LFS)	CANSIM (ASETS, NGS)	CAUT	BC Student Transitions Project (including CDW)	BC Student Outcomes Surveys (AP-PSO, BGS, DACSO)	Other Student Surveys (e.g., BCSSE, CUSC, NSSE, UCAS)
Low income / SES	Y (student loan in RAIS)	Y	Y (student loan)			Y (student loan, sources of funds)	Y
1st generation learner / parental education			Y				Y
Underprepared / low HS success / engagement					Y (BC students)	Y (ABE courses)	Y (self-report letter grades)
Delayed / mature entrants / adult learners	Y (age)	Y	Y (age)		Y (age)	Y (age)	Y (non-traditional >21)
Family structure / dependents		Y	Y				Y
Women or Men	Y	Y	Y	Y	Y	Y	Y
Rural origins		Y (e.g., census subdivision)			Y (region, postal code)	Y (high school)	Y (distance education)
Disability				Y	Y (BC students)	Y	Y
Indigenous / Aboriginal Identity		Y	Y	Y	Y	Y	Y
Ethnic minority / Visible minority	Y (country of citizenship)			Y	Y (country of citizenship)	Y (country of origin)	Y
Minority language		Y	Y		Y (BC students)	Y (learned ESL)	Y
Immigrant 1st or 2nd generation		Y				Y (immigration status)	Y
Employment / dislocated workers		Y				Y (sources of funds)	Y (employment)

* Historical surveys have also provided data for some of the significant studies cited in this paper. PEPS (last collection 2008) is subsumed under ASETS. YITS (last collection 2010) contains all of the group attributes noted above and is national and longitudinal in scope. SLS/F (collected 1991 and 1995) also contains the full range of group attributes and would provide an historical perspective if desired. Researchers seeking access to archived data sets are directed to Statistics Canada Library Services[8].

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[8] https://www.statcan.gc.ca/eng/library/index?MM=as

programs, meant to support access opportunities or remove barriers for underrepresented groups. In these senses, the American context is different from our own, and for the most part we have drawn on it only where it adds specific value to an understanding of the Canadian educational mosaic. This study has limited itself, for the most part, to Canadian-based research, and mainly as well to the more contemporary context, and the period from the mid-1990's onward.

Despite influences from theoretical works from authors such as Bourdieu (1985), as well as engagement, feminist, and other theoretical perspectives that can be detected in discussions, the majority of the national literature on underrepresented groups is empirically rather than theoretically grounded. That is, it speaks directly to its geographical, political and systemic context, rather than illustrating or testing a body of theory.

Dimensions of Participation

A number of studies in the recent literature address the overall dimensions of participation in post-secondary education. Not focused on group or individual characteristics, these studies examine instead the proportions of those who do or do not go on to some form of post-secondary education in Canada or BC. In so doing, they provide a useful overall context within which we can assess the more detailed dimensions of underrepresentation in post-secondary education, to support the core purposes of this paper.

Butlin (1999) compared two national survey data sets (SLS 1991 and SLSF 1995) and noted that 77% of high school graduates had enrolled in some form of post-secondary education over the four-year period. *"Just over 40% of high school graduates had attended university, while nearly 30% participated in community college, and just 7% took trade-vocational training"* (p. 14).

Norrie & Zhao note that in Ontario *"80% of secondary school students enrol in some type of PSE. ...More than half goes to university with the remainder in colleges, apprenticeships, and private training programs"* (2011, p. 2). Also, over 80 percent of youth in the Youth in Transition Survey report having pursued some form of post-secondary education by the time they had reached 26 to 28 years of age (Berger *et al.*, 2009, p. 41).

Using the BC Student Transitions Project (STP) data of high school completers from 2001 through 2006, Heslop (2010, p. 1) reported that within one year of high school graduation, 51% of the grade 12 graduation class enrolled in a BC public post-secondary institution; an additional 2% enrolled immediately in a BC private institution; and, an additional 3% in institutions outside of BC (for a total of 56%). When delayed transitions are included, an additional 25% moved into all sectors (BC public, BC private and non-BC institutions) for a cumulative total of 81% over the six-year period. The STP transition rates to non-BC institutions and BC privates under-estimates the total transition rates beyond BC public post-secondary institutions, given that the STP estimate is based on the sub-population of financial aid applicants and Passport to Education tuition recipients. Thus, the total transition rate is higher.

Figure 1 uses BC STP data to show percentages of public post-secondary graduates to attend each of the two university types, colleges, and institutes, and for those who had yet to transition. The largest percentage of those who transition immediately, enrol in a Research University, while Colleges and Teaching Universities gain the most in enrolment over succeeding years.

FIGURE 1: BC Post-Secondary Transition by Destination – Percent Immediate and Five Year. STP 2010/11 – 2015/16
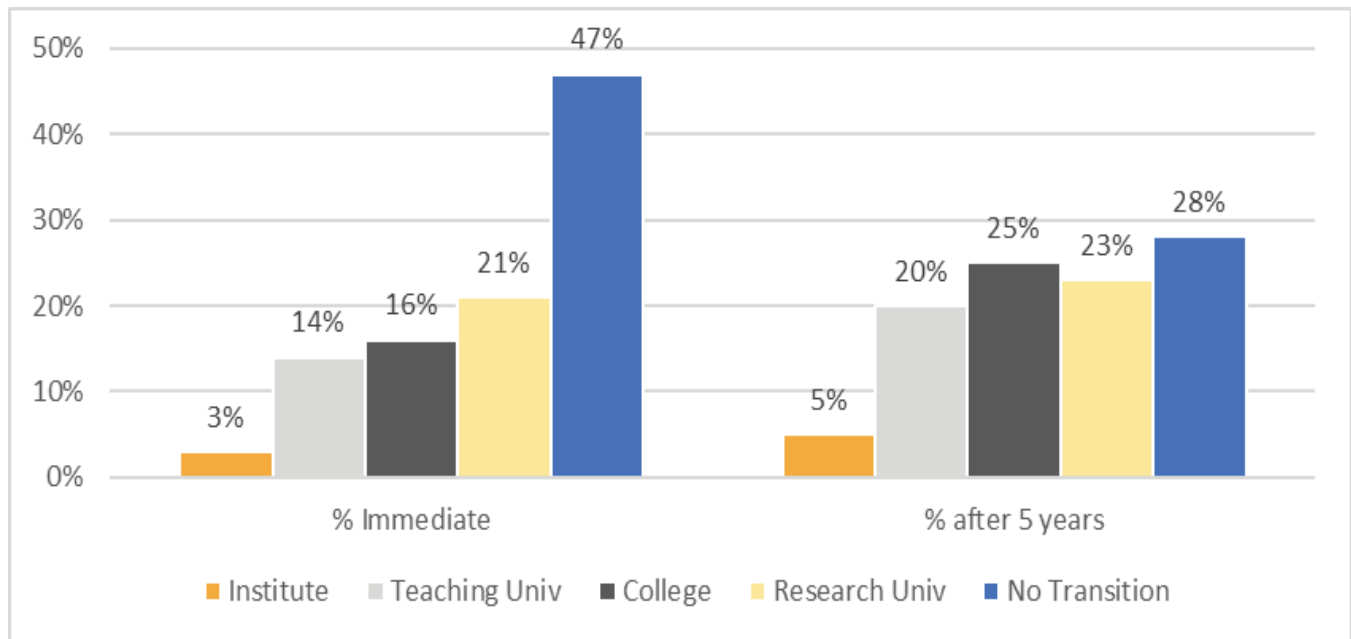
Derived from STP (2017).

Andres (2012) shows markedly higher results in her 22-year longitudinal study of the 1988 BC high school graduating class, and one of the reasons for such results may be the ability to capture transitions to non-BC and BC private institutions. The majority (78%) of high school graduates attended a post-secondary institution within one year: 32% to universities, 24% to community colleges, 17% to university-colleges, to 3% private institutions, and 2% to a combination or other institutions. What's more, within five years following high school graduation, about half of the remainder had attended, and by 2010 (the 22nd year of this longitudinal study), only 3% had not participated in some form of post-secondary education.

While these studies take the perspective of high school graduates and their transition to post-secondary education, different magnitudes emerge when educational attainment of the general population is considered.

Throughout recent decades, younger Canadians have achieved higher attainment rates than older Canadians. Citing OECD data, Berger *et al.* (2009) note Canada has the highest level of educational attainment among OECD countries. They also reported that the attainment rate of Canadian youth between the ages of 25 and 34 (55 percent), is 18 percentage points higher than that of Canadians aged 55 to 64. Furthermore, they use 2006 Census data to show that among students aged 25 to 34 years, 67% had a post-secondary qualification (p. 38).

CCL (2009, p. 37) noted a 15-year increase in the proportion of the working-age population with post-secondary credentials, from 43% in 1993 to 60% in 2007.

For current data on educational attainment, the 2016 Census shows that about 6 in 10 people (56%) have a post-secondary credential: this number increases to 64% of the population aged 25 to 34 years. 54% of Canadians aged 25 to 64 had a qualification from college or university (an increase from 48% in 2006) and an additional 11% of Canadians had an apprenticeship or other trades certificate for a total of 65% (Statistics Canada, 2017, p. 2).

FIGURE 2: Canada Educational Attainment – Highest Level of Certification – 2006 & 2016 Census
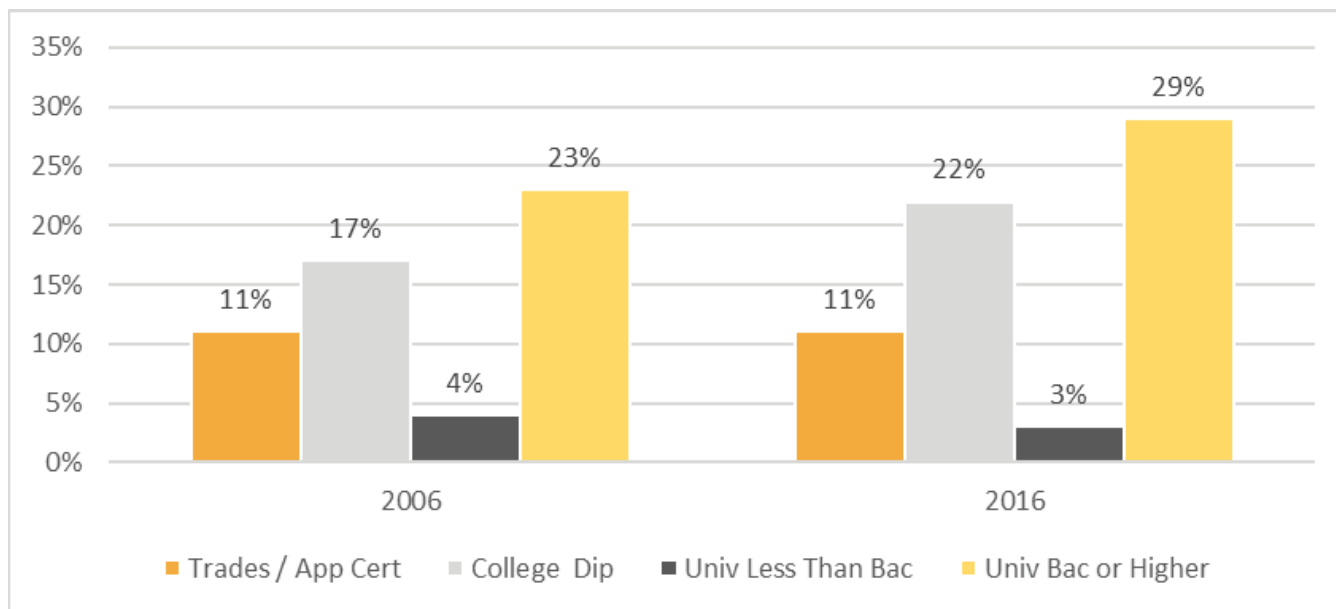
Derived from Statistics Canada CANSIM (2007, 2018)

Figure 2 summarizes changes in the educational attainment of those aged 25 to 64 in Canada's population. Increases are seen in both College credentials, from 17% to 22%) and in University Baccalaureate or Higher degrees (from 23% to 29%).

Overview Works

Several authors have recently examined access and participation across multiple groups. Some have engaged in original research, while others provide surveys or summaries of the research on underrepresented groups.

The Price of Knowledge appeared in four editions between 2004 and 2009 (Junor & Usher, 2004; Berger *et al.*, 2009). Using a number of data sources, including student outcomes survey data from across Canada, Statistics Canada, and private survey data sets (also citing studies of other authors working in each area), these publications examine the participation evidence in relation to socio-economic background, parental education, visible minorities, students with disabilities, Aboriginal students, students with dependents, and students from rural areas. Also examined are those with academic challenges, and motivational challenges.

In a study for Colleges Ontario, King *et al.* (2009) referenced enrolment and interview data to review the evidence and defining factors of underrepresented groups. These included gender, region, ESL study / minority language, First Nation origin, and orientation to employment. Also examined were the effects of high school academic achievement, high school engagement, parental and peer influence, and the influence of other types of information and decision supports.

Smith & Gottheil (2010) note in their discussion of Strategic Enrolment Management (SEM) that SEM efforts typically focus on providing access to underrepresented groups, including new immigrants, first generation learners, rural students, students with disabilities, dislocated workers, sole source parents, low income students, and minority ethnic or language students.

Table 2 summarizes the studies and provides guidance as we embark upon detailed examination of equity and participation literature for each of the listed group identified. The research and literature on access and participation, underrepresented groups, and barriers to post-secondary access touches the very kernel of purpose and value that has motivated the evolution of Canada's post-secondary systems.

TABLE 2: Underrepresented Groups by Source Study

	Junor & Usher, 2004; Berger *et al.*, 2009	King *et al.*,2009	Smith & Gottheil, 2010	Finnie *et al.*, 2011a	Norrie & Zhao, 2011	Deloitte, 2012	Stonefish *et al.*, 2015
Low income / SES	X		X	X	X	X	X
1st generation learner / parental education	X	X	X	X	X	X	X
Underprepared / low HS success / engagement	X	X	X			X	
Delayed / mature entrants / adult learners			X			X	X
Family structure / dependents	X		X	X			
Women or Men		X	X				
Rural origins	X	X	X	X	X	X	
Disability	X		X	X	X	X	X
Indigenous	X	X	X	X	X	X	X
Ethnic minority / Visible minority	X		X				
Minority language		X		X	X		X
Immigrant 1st or 2nd generation			X	X	X		X
Employment / dislocated workers		X	X				

The Groups in the Research and Literature

Low Income, Socioeconomic Status or Financial Barriers

One of the most-explored topics in this corpus is the relationship between income or financial resources, and post-secondary participation. Also explored in this context are the complex of variables intersecting socioeconomic status, family values and expectations, and the concept of "Cultural Capital". We see factors that both constitute barriers to access, and that define underrepresented groups.

Starting with financial resources taps us in to a historical literature and policy framework virtually as old as post-secondary education itself. Two aspects of the issue are prominent in this literature: limitations of family income, resources, or wealth, and conditions of personal finances or financial barriers; and the underrepresented group so identified is composed of those from low-income backgrounds or circumstances.

> "...a substantial body of research has consistently replicated the finding that over the course of this century students from families of higher socio-economic status are more likely than their less privileged peers to enter post-secondary education, and especially university." (Guppy & Pendakur, 1989, p. 50)

Indeed, low income or socioeconomic status has long been recognized as a barrier to post-secondary access in the literature. Studies using Canadian data prior to 2000 consistently demonstrated that income affects post-secondary participation, and this finding is more pronounced with regard to university attendance. Butlin (1999) noted a number of studies that affirm these findings; see also Knighton & Mirza (2002) and Barr-Telford *et al.* (2003).

For example, Knighton & Mirza (2002) used SLID data 1993 – 1998 data to show that household income plays a strong role in post-secondary participation: nearly 75% of those from the highest income quartile participated in some post-secondary education, compared to just over 50% for the lowest quartile. Consistent with the studies noted above, the strong relationship with university access is seen: those from the highest quartile were more than twice as likely to go to university as those from the lowest, 39% versus 17% (p. 28). PEPS data reveals similar magnitudes, as just over 50% participated from the lowest income quartile compared to 81% from the highest (p.7).

Other, more recent studies, emphasize that an income-related participation deficit continues to exist in Canada, and they have explored and quantified its contours using various data sources.

YITS data reveals a similar clear relationship between family income and post-secondary participation: 63% for the lowest income quartile versus 89% for the highest (Finnie *et al.*, 2015, p. 235). It also reveals that approximately 93% of high school students who did not continue to post-secondary education, cited financial barriers as influencing their decision (Junor & Usher, 2004, pp. 53-55). The Berger *et al.* 2009 update of the Price of Knowledge study, found that although the gaps had narrowed marginally, the overall patterns, and the strong relationships between various aspects of income and participation, remained in place five years later (p. 45).

Figure 3 shows post-secondary participation for the lowest and highest income quintiles, and it demonstrates the stark differences in university participation between the two.

FIGURE 3: Post-Secondary Participation Percent by Destination and Income Quintile YITS 2006
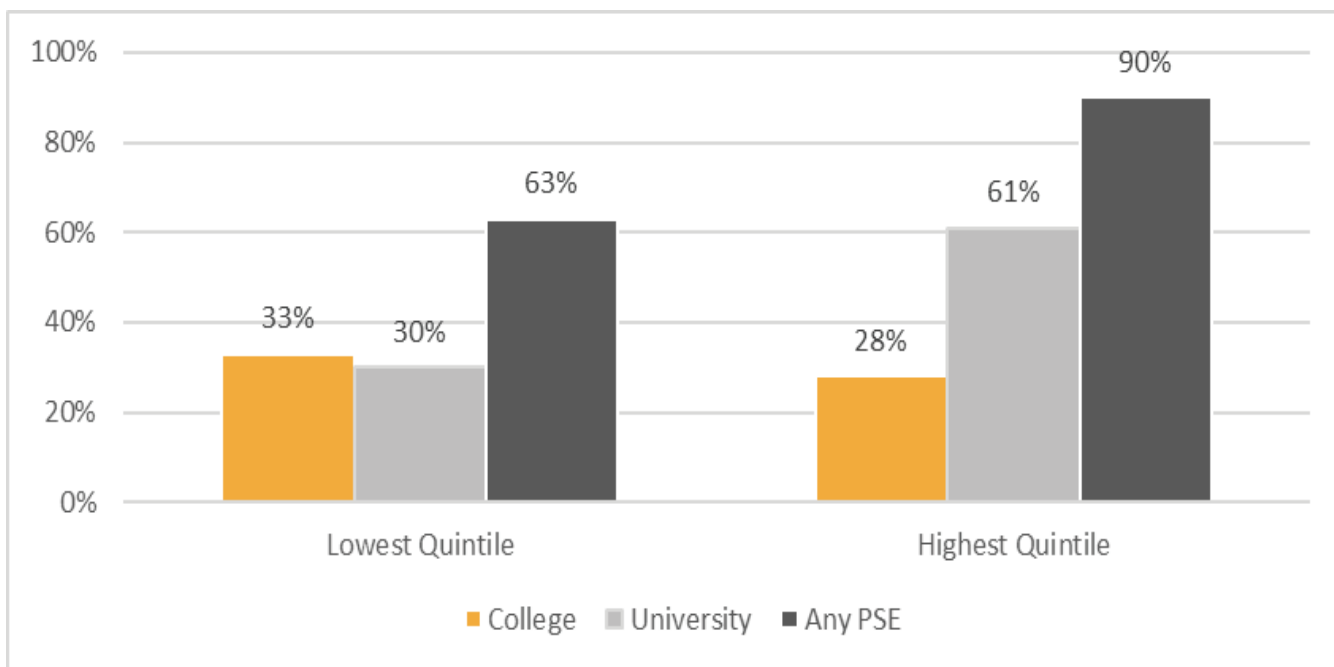
Derived from Finnie *et al.* (2015)

In a broad ranging analysis by the Canadian Council on Learning (2009), there was a 21 percentage- point difference in university participation noted between students from the lowest income group and those at the highest income level. College and CEGEP participation rates were closer: 40% of the lowest income group participated in college or CEGEP, compared with 44% of students from the highest income group (p. 31).

However, other studies have shown that only a portion of the participation difference could be attributed directly to credit or other financial constraints, and that other correlates, including parental education, parental expectations, peer influences, and motivational factors, accounted for the majority of the observed differences (e.g., Finnie & Mueller, 2007; Frenette, 2007). McElroy (2008) also noted the family income, family education, and participation relationship across four groups with different graduation pathways. She also noted, however, that three out of the four most common barriers cited in her study, were affordability related (p. 30).

Mueller's (2008) work focused specifically on access to post-secondary education by those from low-income origins, showing the inter-correlation of factors including family background (parental education, SES, wealth), and information constraints (lack of or faulty information), as well as near-term financial constraints themselves (p. 10-23). His work is valuable because he surveys a large number of studies across Canada and the US, utilizing a number of different data sources in making his observations.

Finnie *et al.* (2011, 2015) also explore cultural correlates, including parental education, family orientation, values, expectations, preparation, and the like. The perspective revealed is not one of overcoming financial "barriers" per se, but how motivational and familial factors, including income or relative wealth, condition *"who wants to go on to PSE and who prepares themselves to do so"* (2011, p. 4).

These and other studies lead us to a broader set of issues beyond family or personal income, or more generally socioeconomic status, to a complex of factors that includes values and motivation. Although there is a clear statistical relationship between income and access, and particularly with respect to university access, there are clearly also intervening factors that mediate the relationship.

In searching for perspectives, some are drawn to the work of Pierre Bourdieu (e.g., Junor & Usher, 2004). Bourdieu in his 1985 *Forms of Capital*, discusses three types of capital – economic, social and cultural; the distinctions between them, and their interplay. While economic capital is the obvious measurable manifestation of income and wealth, social capital embodies the resources derived from networks and relationships. Cultural capital is a person's education, knowledge and intellectual skills that help protect or improve one's position in society. Crucial here is the notion of "embodied" cultural capital which is the knowledge that is acquired, inherited, or absorbed by socialization to culture and tradition. In short it is those dispositions and tendencies which one obtains through family, peer, and societal relationships. It is this recognition that has led many who study post-secondary participation, to argue that although there is an obvious correlation with income and wealth (economic capital), the immediate factors that determine life's pathways, including educational participation, are the consequences of cultural capital. This includes such factors as parental education, familial and peer attitudes and expectations, and the availability of other needed relationships that empower access. This has led many to look for relationships in the data that include these very factors: parental education, peer attitudes, and engagement.

First Generation Post-Secondary Participant or Low Parental Educational Achievement

Numerous studies have explored the relationship between post-secondary participation and family factors, moving beyond income or wealth to include cultural elements, such as parental education, family values and expectations, motivation and aspirations, as well as peer and social relationships.

In particular, many studies have explored the specific relationship between parental education and an individual's post-secondary participation. As with financial factors, the specifics and magnitudes vary with the data-set employed, but the overall findings are similar: 1) that parents' level of educational attainment has a strong effect on participation in university, community college, or trades school; and 2) the effect is strongest for university participation.

SLS/SLSF data reveals a 7:3 differential in university participation, between individuals with at least one university-educated parent, versus those with none (Butlin 1999, p. 21).SLID data indicates that 88% of those with university-educated parents attended post-secondary education, compared to 68% whose parents were college-educated, and 52% of those whose parents had a high school diploma or less (Knighton & Mirza, 2002, p. 28).

CCL (2009) data highlights a similar strong effect of having a university-educated parent (Figure 4). Analysis of YITS data shows that for those who did not go on to post-secondary education, low levels of parental education, ambivalent parental or peer attitudes towards post-secondary education, low academic engagement and success, and lack of positive motivational factors towards post-secondary education, were all important determinants (Tomkowicz & Bushnik, 2003, pp. 12-14). An analysis of PEPS data found similar results, noting that 18- to 24-year-olds, who had at least one parent with some post-secondary education, were more likely to participate than were those with parents who had not taken such studies. Here again, the effect was most marked when at least one parent had a university education (Barr-Telford *et al.*, 2003, p.7)

FIGURE 4: Post-Secondary Participation, Percent by Destination and Parent Highest Education, SLID 2006
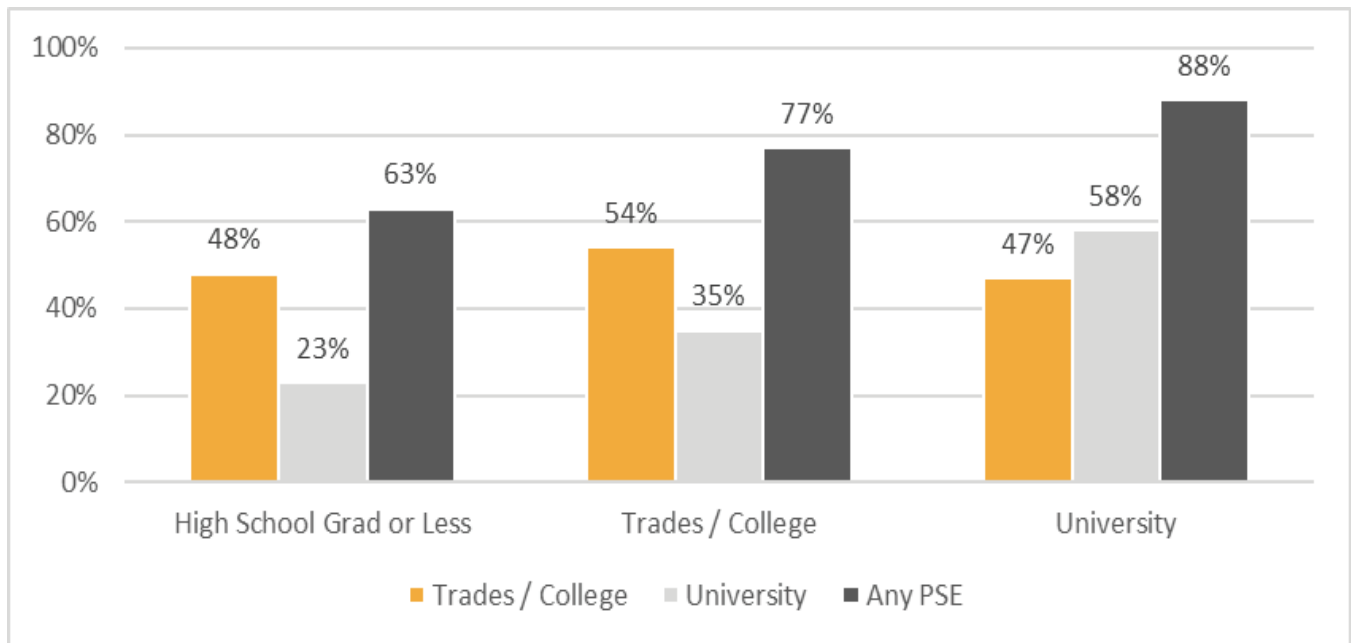
Derived from CCL (2009)

Junor & Usher (2004) also reviewed SLS /F, YITS, and PEPS data in relation to continuance to post-secondary education and Father's Highest Level of Education. They found that 52% of those whose parents had less than secondary completion did not continue to post-secondary education, versus 26% whose parents had gone to college or trade school, and 13% who had gone to university. They also found that the dominant reason among the non-continuers was "interest/motivation" at 53%, compared to "financial" reasons, at 16% (pp. 5-9). However, in an interesting turnabout, they also found that interest and motivation were correlated with income, and it was especially low among those with low-income backgrounds. "*This result is consistent with theories of access to post-secondary education that view cultural capital as a determining factor.*" (p.96).

Berger *et al*. (2009) found similar results five years later, noting the relationship with parental education is most strong for university bound students. The parental education relationship is much less strong with those who are college bound, and colleges appear to provide an important equalizing role for first generation learners, or those from less educated families (p. 47).

Lastly here, an analysis of twelve years of General Social Survey (GSS) data noted an improvement over time in the success of first generation learners. "*For people whose parents did not graduate from university, the probability of holding a degree nearly doubled from 1986 to 2009, from 12% to 23%.*" (Turcotte, 2011b, p. 41). While this rate of growth in university degree completion was approximately that of the general population, it none-the-less represented an historically unprecedented increase for first generation learners. However, proportionally, first generation learners with a university degree were still significantly outdistanced by those with at least one university-educated parent (23% vs 56%) (Turcotte, 2011b, p. 40).

Many other studies have found not only a strong relationship between parental education and access, but have explored correlates such as values, attitudes, motivation, and engagement with education, that one might expect to stem from, and be transmitted via, parental backgrounds. Examples include Butlin (1999), Lambert *et al.*, (2004), King, *et al.* (2009), Finnie & Mueller, (2007), McElroy, (2008), Norrie & Zhao, (2011), Finnie *et al.*, (2011a), and Finnie *et al.*, (2015).

In an interesting international perspective, Lalonde & McKean (2017) reviewed data across 15 Organization for Economic Cooperation and Development OECD countries, including the effect of parental education on post-secondary access. While they see a relationship between the two in the Canadian data, they note it is weak compared to other countries. Canada ranks 11th (fourth from the bottom), while the US and France rank 1st and 2nd respectively in the strength of this relationship.

In an earlier international study, De Broucker (2005), writing for the Canadian Policy Research Network (CPRN) in a joint study with the OECD, examines populations with low levels of education and not continuing to post-secondary. The study notes a correlation in Canada between parental education and post-secondary participation: 35% of those not continuing had parents with less than high school graduation, compared to 11% overall (p. 24). Interestingly, members of this group are also three times more likely to come from low socio-economic families.

> *"...the consensus that has emerged in the literature is that parental education is a much better predictor of PSE participation than is parental income, and that culture trumps money where culture is a shorthand term for the myriad and multi-faceted family-based influences that appear to be related to parental education (and other family characteristics) which affect a young person's attitude to, and preparation for, PSE."* (Finnie *et al.*, 2011, p. 5).

Underprepared or Low Secondary School Success

It takes no stretch of logic to suppose that those with low high school motivation and engagement may be underrepresented in post-secondary education. Those who experienced low secondary school success either delay or do not complete high school are more likely to be underprepared in key areas such as Math and English (e.g., Lambert *et al.*, 2004). Logic might also indicate that this under-representation would be most visible in universities, where selective entry is usual, and less so in colleges, where foundational studies and upgrading opportunities are part of the institutional mandate.

Junor & Usher (2004) note: *"Academic barriers...are the prime deterrent to post-secondary education for about 10% of youth who do not pursue studies beyond high school. They are a much more important deterrent for students attempting to enter universities (which have selective application procedures) than they are for those attempting to enter colleges (which do not)."* (p. 91).

> It takes no stretch of logic to suppose that those with low high school motivation and engagement may be under-represented in post-secondary education. Or indeed, that those who experienced low secondary school success either delay or do not complete high school are more likely to be underprepared in key areas such as Math and English.

Indeed, Beatty-Guenter & Cowin (2013) made use of STP data to review post-secondary participation of high school non-graduates. Although we do not know the proportions of high school non-completers who went on to some form of post-secondary education from this study, it does show that the majority who did go on, transitioned into a Developmental or Non-credit course of study (60%); and that 60% were enrolled in a college, while only 6% were enrolled in a university (p.3).

Heslop (2016) also made use of STP data in a study that more clearly shows the disadvantage of high school non-graduates. Tracing the paths of Grade 8 entrants, the study shows that only 31% of non-graduates attended BC public post-secondary institutions, compared to 67% of the cohort overall. The study also shows that nearly half of non-graduates initially enrolled in developmental programs compared to only one-tenth of the overall cohort (p. 18), and that eventual credential completion for non-graduates was less than one half that of high school graduates (18% vs 41%) (p. 21).

An examination of SLS/SLSF data, found that academic performance and related factors were important determinants of post-secondary participation: drop-outs or stop-outs, those who failed a grade, or those with problems with high school English or Math, all lowered the probability of attending post-secondary (Butlin, 1999, pp. 25-30).

ACCATO (2004) noted that a large proportion of Ontario Grade 9 students left high school early, with low prospects for employment, and a serious educational deficit to overcome. ACCATO identified *"youth and adults with low literacy skills"*, as one of their four key population segments with college access issues, (pp. 11, 19).

Other studies have found that academic effort, performance, and program of study, have pronounced effects on post-secondary participation, and identify low high school academic engagement and success, and lack of motivation towards post-secondary education, as important factors in continuing (Tomkowicz & Bushnik, 2003, pp. 12-14). Finnie & Mueller (2007) found a strong relationship between overall high school grades and university attendance, while high school engagement, and particularly academic engagement, were also significant factors (p. 10). Others who note the effect of academic preparation on participation include King *et al.* (2009), Finnie *et al.* (2011), and Deloitte (2012) among many.

Lastly here, McElroy (2008) considers the role of academic achievement, course selection, and grades (p. 4), in a study of four post-graduation pathways (including non-attenders). She also explores the role of academic engagement and high school experiences (pp. 6-7), as well as goals and aspirations (p. 13). She finds a positive relationship between each of these factors and post-secondary participation.

Family Structure, Dependent Responsibilities; Former Youth in Care

The literature identifies family structure, through differing familial relationships, as affecting post-secondary education access and participation. Its various aspects are usually addressed separately, depending on the study and its context, and are often examined along with their close correlates, which include gender, and income.

Children of a Single Parent

SLS/F data reveals that those from a single parent family are somewhat less likely to be participants in post-secondary education (73% vs 79% two-parent), and less likely to attend university (35% vs 44% two-parent) (Butlin, 1999, p. 15). Butlin cites a number of correlates in this regard including parental education, high school success and motivation.

YITS data show a similar differential in overall post-secondary participation, between those from single parent families (78%), and those from two parent families (83%). As above, those from single parent families are underrepresented in university (36% vs 48%), however they are overrepresented in other types of post-secondary (41% vs 36%) (Norrie & Zhao, 2001, P. 10). Finnie *et al.* (2011) note a similar effect, where those from single parent families are 11% less likely to attend university than those from two parent families; but that the college differential is small and not statistically significant. Figure 5 summarizes these studies.

FIGURE 5: Post-Secondary Participation by Family Factor, SLS/F 1995 and YITS 2002
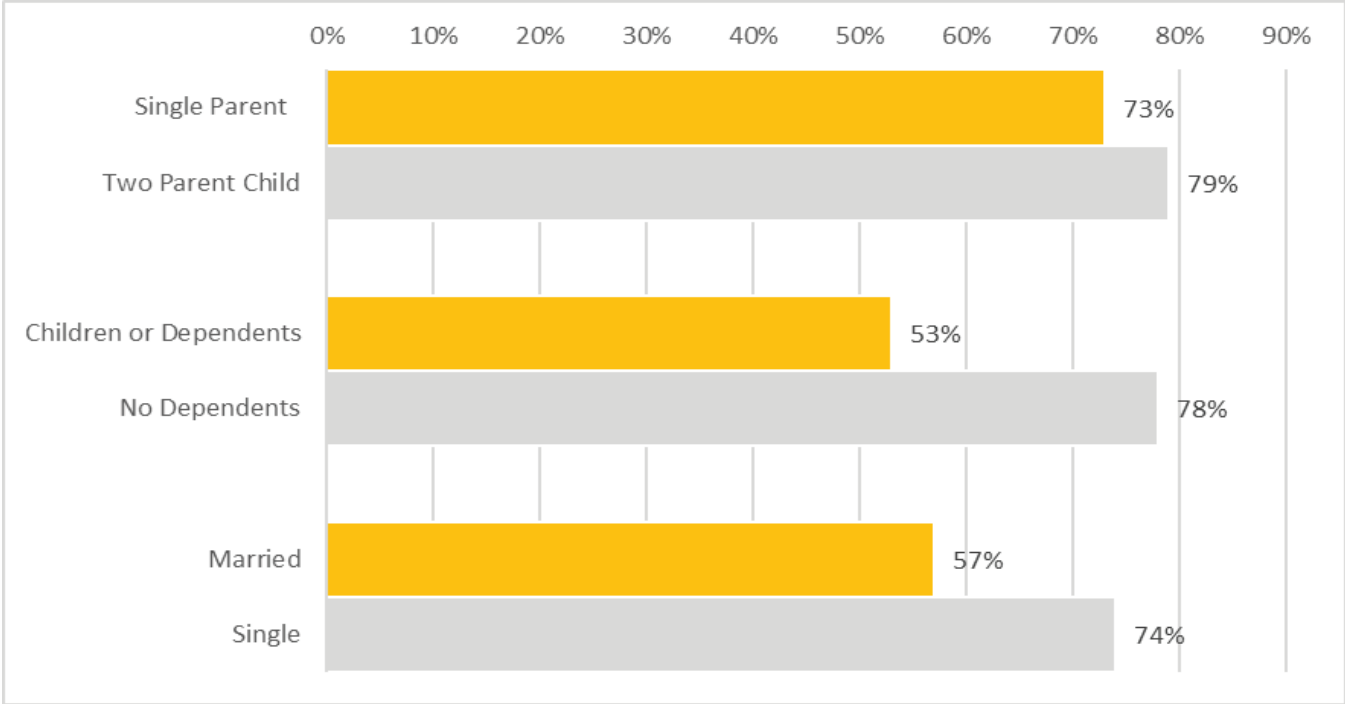
Derived from Butlin (1999) and Lambert *et al.* (2004)

Former Youth in Care

Former 'Youth in Care' are a group of individuals who were placed in foster homes or other protected care arrangements as youth, and who have subsequently "aged out" of the Provincial care system. Having done so, they are no longer eligible for most forms of government funding, and other supports formerly available in the protected family environment. They may face multiple barriers to education and life success, including homelessness, lack of educational success, and mental health and addiction issues, among others. They are believed, for these reasons, to constitute an underrepresented micro-group, who are without the financial and other resources necessary to access post-secondary education on par with the general population. While they do not appear in the scholarly literature, they have been a focus in BC of recent institutional and government policy, as well as media attention. Following VIU's and NVIT's earlier leads, the provincial government in 2017 instituted a tuition waiver to promote increased access to post-secondary institutions for former youth in care. While there is as yet no systematic data published, a recent Times Colonist article reported a 20% increase in registrations for this group, province-wide (TC Jan 19, 2018; p. A4)

Those Caring for a Child, Other Dependent, or Married

Those with family responsibilities can be limited in post-secondary participation, by time constraints and the complexities of managing the needs of others. SLS/F data reveals that 47% of those with one or more children were likely to be non-participants in post-secondary education, versus 22% with no children (Butlin, 1999, p.15). A different view of SLS data showed that those with children comprised 5.3% of the sample, yet only 1.5% of those who continued to post-secondary (Foley, 2001, p.3). Foley also notes that 6.5% of the sample was married, yet only 2.1% of those who continued to post-secondary education.

YITS data (Tomkowicz & Bushnik, 2003) confirm these overall trends, in that twice the proportion of non-continuers were married (12% versus 6% single) but the relationship held for females only. Also, three times the proportion of discontinuers reported having children (6% versus 2% of PSE participants) (p. 11). YITS data also show that those caring for a child were significantly less likely to have ever participated in post-secondary education (39% vs. 74% childless), and they were very significantly less likely to have participated in university (5% vs 35% childless). Those who were married or in a similar relationship were less likely to attend post-secondary education in general (57% vs. 74% single) and university particularly (15% vs 36% single). In both cases (single parents and married or similar relationship), college and other types of post-secondary participation, was less significantly affected (Lambert *et al.*, 2004, p. 9). YITS data also shows that only 2% of high school completers who did not continue on to post-secondary education, declared "Caring for Children" as a barrier (Bowlby & McMullen, 2002).

University (CUSC), and college (CCSSC) survey data show that students with one or more dependents constitute a minority on campus. Such students make up 8% of university and 22% of college enrolment, and students with dependents tend to be older, and more frequently studying part time (Junor & Usher, 2004, p. 89).

In a separate analysis of CUSC and CCSSC data, Holmes notes:

> "Having to support a dependent can clearly be a barrier to post-secondary studies, just as it can be a barrier to full-time employment. The problems are often financial, but the time demands of education and dependent care can be an equally important issue." In addition, "Being married is also a predictor of nonattendance for both men and women. Some 8% of 20–year-old females attending post-secondary education were married, while 11% of those delaying and 18% of those opting not to go at all were married. For men, the figures were 4%, 4% and 8%, respectively." (2005, pp. 22-23)

Indigenous People – First Nations (Status and Non-Status), Metis and Inuit

In the context of identifying underrepresented groups in Canadian post-secondary education, certainly no group has been more discussed in the literature than Indigenous people – First Nations, Metis and Inuit. Most studies cite Census data to document the degree of Indigenous under-representation in post-secondary education, and increases have been documented over the years. Other studies add nuances and perspectives, through survey and other data sources; and the published voices of the various Indigenous organizations add depth to this topic. The following provides a small sample of this large literature.

The basic contours of Indigenous underrepresentation can be drawn in reference to Census (and National Household Survey) data from Statistics Canada (Statistics Canada, 2012b). According to 2016 Statistics Canada CANSIM data (Statistics Canada, 2016; Table 477-0135), there are two significant gaps between the Indigenous and Non-Indigenous populations.

The first is in the number of Indigenous students who do not graduate from high school, where 29% of the Indigenous population aged 25 to 64 have no high school diploma, while only 13% of the Non-Indigenous population do not graduate. As well, there appears to be a significant delay factor for those who do eventually graduate. Mendelson (2006), citing 2001 Census data, notes that approximately 43% of Aboriginal individuals had not graduated high school by age 24 (p. 10), and CCL (2009a) also noted this late graduation trend in the 2006 Census (p. 44).

The second gap is in post-secondary participation itself, where only 48% of the Indigenous population has some level of post-secondary education, compared to 64% of the Non-Indigenous population CANSIM (Statistics Canada, 2018; Table 477-0135). Access is relatively similar for the two groups across trades, college and early university studies, but for BA attainment of persons aged 25 to 64 years, it is 10% for Indigenous persons versus 26% for Non-Indigenous.

The STP confirms these gaps for BC with an important approach. The STP uses overall rates and proportions to infer on the basis of 100 Aboriginal and 100 non-Aboriginal students entering Grade 8. On this basis, only 34 of the 100 Aboriginal students would have entered post-secondary in the subsequent 10 years, while 60 of the non-Aboriginal students would have done so. The greatest gap appears to be in high school graduation (Student Transitions Project, 2016). Delay of entering post-secondary is seen in BC student transitions research: Heslop (2012) uses STP data to demonstrate a consistent 13% gap between Aboriginal and Non-Aboriginal high school graduates transitioning immediately to post-secondary education. The five-year cumulative transitions show a consistently smaller 7% gap (p. 3).

Studies have also noted gender differences within Indigenous participation: Indigenous women are more likely to graduate high school and participate in post-secondary education than men, and considerably more likely to access university (e.g., Mendelson, 2006). CUSC and CCSSC data for 2003 illustrate the predominance of Aboriginal females in both university and college studies: females constituted 72% of the Aboriginal university population and 63% of the Aboriginal college population, while comparative figures for Non-Aboriginal females were 65% and 53% (Junor & Usher, 2004, pp. 65-66). *"The personal characteristics of Aboriginal students are ... somewhat different from the rest of the student population...they are on average both older and more likely to be female... married, have children, or have some kind of disability."* (Junor & Usher, 2004, p. 63).

In terms of post-secondary attainment, while Indigenous people have increased in their access to post-secondary education over time, they have not kept pace with the Non-Indigenous population in this regard. In the 1996 Census, 40% of the Aboriginal population 25 to 64 years had some post-secondary education. In 2001 the percentage was approximately 42%; and it was 48% in 2016. The figures for the Non-Aboriginal population, were 51%, 55%, and 64%, respectively. *"In 2016, 10.9% of Aboriginal people overall aged 25 to 64 had a bachelor's degree or higher, up from 7.7% in 2006. The proportion of Aboriginal people with a college diploma rose from 18.7% in 2006 to 23.0%."* (Statistics Canada, 2017b)

FIGURE 6: Canada Educational Attainment – Percent Indigenous & Non-Indigenous Census 2016
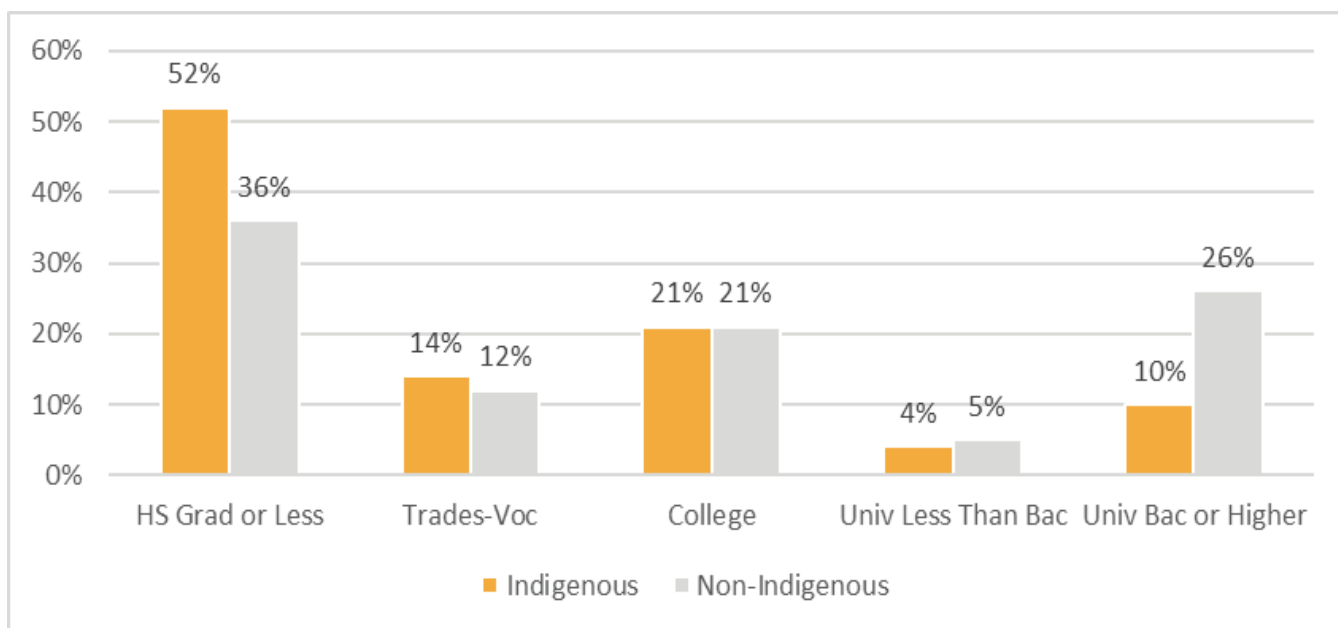
Source Data: Statistics Canada CANSIM (2018)

Figure 6 compares Indigenous and Non-indigenous educational attainment, and demonstrates the significant differences in high school graduation, and university degree attainment. A number of other studies have examined the correlates of Indigenous underrepresentation, and have found them to include, in many respects, those that face other populations: income and finances, parental education, family values and expectations, family structure, secondary school preparation, and others examined in this paper (e.g., Holmes, 2005; Mendelson, 2006; Berger *et al.*, 2009; CCL, 2009a; King *et al.*, 2009; Frenette, 2010; Finnie *et al.*, 2011; Norrie & Zhao, 2011). Noted by many (e.g., ACCATO, 2004; CCL, 2009a; Restoule *et al.*, 2013), not only do Indigenous people face most of the barriers of other populations, these are often magnified and exacerbated by a common history and lived experience of insensitivity, discrimination, and marginalization.

Restoule *et al.* (2013) summarize by saying:

> "Aboriginal students face numerous barriers in accessing post-secondary education, including inadequate financial resources, poor academic preparation, lack of self-confidence and motivation, absence of role models who have post-secondary education experience, lack of understanding of Aboriginal culture on campus, and racism on campus... These factors, coupled with a history of forced assimilation through non-Aboriginal educational institutions ...ensure a challenging path for Aboriginal people wanting to pursue post-secondary education. Aboriginal students considering post-secondary studies also face the legacy of distrust towards the Canadian educational system due to historically ethnocentric practices and residential schools" (p. 9).

We see then that although Indigenous peoples are in a category of their own for the purposes of this paper, their participation rates are connected to, and share, all of the other factors discussed. These include poverty and its correlates, lower parental education and often first generation access, the fact they are Canada's youngest and fastest

growing population, that many are single parents or other care givers, the disproportionate representation of youth in care, often English language challenges, that most reserves are rural and remote, and the legacy of an irrelevant K-12 experience – are all contributing factors to underrepresentation and barriers to access for Indigenous people.

Rural Residence and Distance from Post-Secondary Opportunities

The rural versus urban differential in post-secondary participation has been consistently noted in the literature over the period reviewed, and points toward the identification of those from rural origins, or living some distance from post-secondary opportunities, as an underrepresented group. Because colleges are more regionally dispersed than universities, the differential is most clearly seen between these two institution types.

SLS/F data reveals a modest differential in participation of those from a rural home, of whom 74% participated, compared to 79% from urban backgrounds. The difference increased markedly for university participation, where only 34% from rural backgrounds attended, versus 45% from urban origins (Butlin,1999, p. 15).

YITS shows larger differences, including a 17% differential (65% vs. 82%) overall (those who attend college or university or other types of PSE such as trades education), while continuing to demonstrate the preponderance of the university participation gap (Shaienks & Gluszynski, 2007, p. 9). Figure 7 illustrates these differences.

FIGURE 7: Post-Secondary Participation - Percent by Rural-Urban Origin YITS 2005
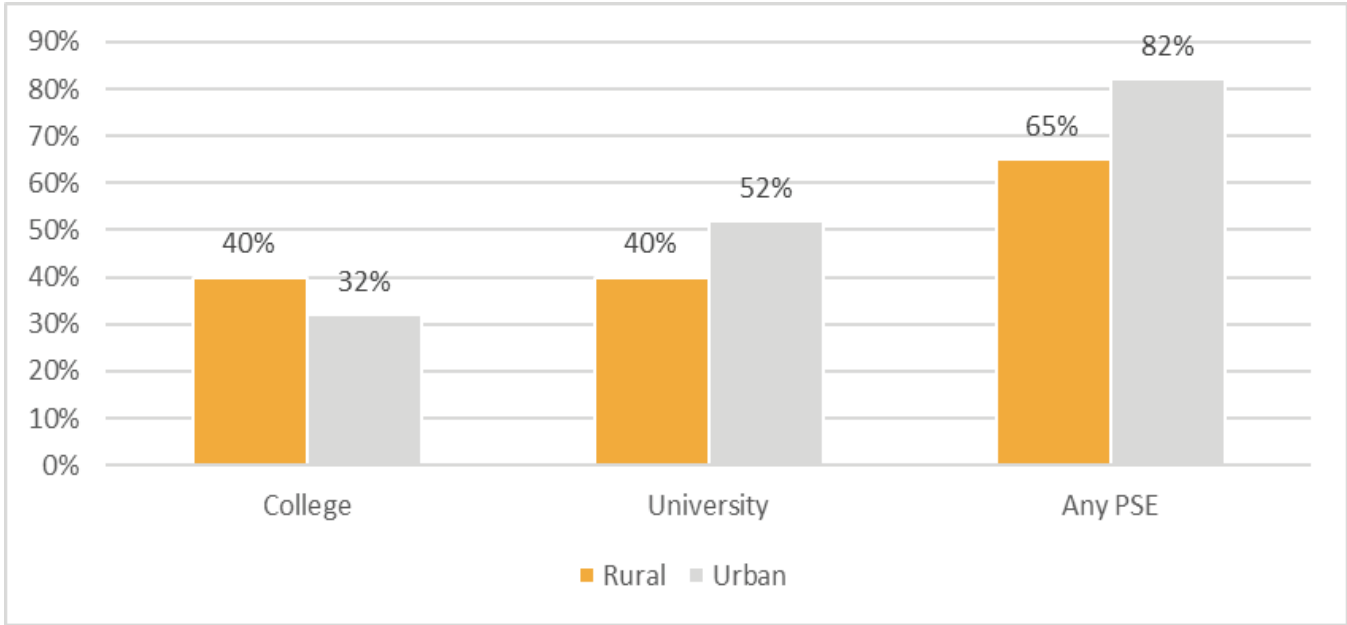
Source Data: Shaienks & Gluszynski (2007)

Rural/urban differentials continued to be seen in the literature over the period reviewed, and in some cases the gap is seen to widen. The ACAATO (2004) study referencing both Ontario and Canadian data, cited an increase in those with less than post-secondary-level education, and noted *"Part of the urban-rural education gap is the result of geography, that is, limited access to post-secondary education in or near one's own community"* (p. 21).

Others also argue that the rural-urban difference is a proximity issue, and mainly related to university attendance. Junor and Usher (2004, p. 72) note that 13% of Canadians live more than 80 km from a university, but only 3% live more than 80 km from a community college. They also note (p. 75) that 33% of students moved to attend a university, but that just 18% had moved to attend a college.

McElroy (2008) adds the factor of choice to the discussion, noting that while only 15% of the population lives beyond commuting distance of some post-secondary institution, those in closer proximity to urban areas have a larger number of such choices available, and are freer to select the alternative that best suits their goals (p. 21).

The STP shows that the transition to post-secondary is higher for BC Grade 12 students from urban than from rural areas: 64% immediate entry transition rate from the most urban (Vancouver/Langara) region, but only 36% immediate entry transition rate from the rural Northern Lights and Rockies regions. Over time, however, the cumulative transition rates tend to level out somewhat (Student Transitions Project, 2016).

A number of other authors reviewed have noted a persistent urban-rural differential, including Lambert *et al.* (2004), Frenette (2004, 2006), Berger *et al.* (2009), CCL (2009), King *et al.* (2009), Looker (2010), Smith & Gottheil (2010), Finnie *et al.* (2011), Norrie & Zhao (2011), and Andres (2012).

Reasons for, or correlates of, the rural-urban differential include academic preparedness, cost, parental and family factors, familiarity, and other motivational factors. Some authors (e.g., Finnie *et al.*, 2011; Looker, 2010) see a combination of these factors, either partially or entirely explaining the gap.

Disability or Ability Limitation, Health or Mental Health Challenge

Persons with an ability limitation or "disability" are widely recognized in the literature as an underrepresented group in Canadian post-secondary education. As with other groups, the statistics often vary depending on the source and sub-population (e.g., age group) under discussion. However, the term "disability" can cover a broad range of conditions, and the indication is usually self-reported through the Census, surveys, or by identifying to a service provider, thus increasing the variability of estimates. The term usually refers to a range of limitations, from physical, such as sight, hearing, or speech, mobility impairment, head or other injury; to neurological impairment, learning disabilities, and certain types of mental health issues. In data cited by Junor and Usher (2004, p. 59), these latter, essentially "invisible" limitations, account for up to 40% of the total.

The Canada–British Columbia Labour Market Agreement for Persons with Disabilities—Annual Report (Government of BC, 2016) citing Statistics Canada's Canadian Survey on Disability (CSD) estimated 546,760 British Columbians, age 15 and over, had a disability – representing 14.8% of the population (p. 4). In the 2001 Participation and Activity Limitation Survey (PALS), a national post-census survey of 43,000 people, 12.4% of the Canadian population reported a disability. According to this report, the incidence of ability limitation rises with age, and rates of limitation are lower in the traditional post-secondary age ranges than in other categories. For the population aged 15 to 34, the limitation rate ranges from a low of 3.5% at the younger end of the distribution, to 5.2% at the older end. (Junor & Usher, 2004,

p. 57). Junor & Usher (2004) also cite CUSC 2002 and CCSSC 2003 data, noting: *"These surveys report that 5.4% of university students and 8.1% of college students have a disability, which suggests that across post-secondary education as a whole the figure is between 6% and 7%."* (p. 59).

The post-secondary participation rate for ability limited persons is constrained by the evidently low high school completion rate; perhaps not surprisingly considering the proportion with learning and other cognitive limitations.

FIGURE 8: Canada Educational Attainment – Percent Ability Limitation & Those Without CSD 2011
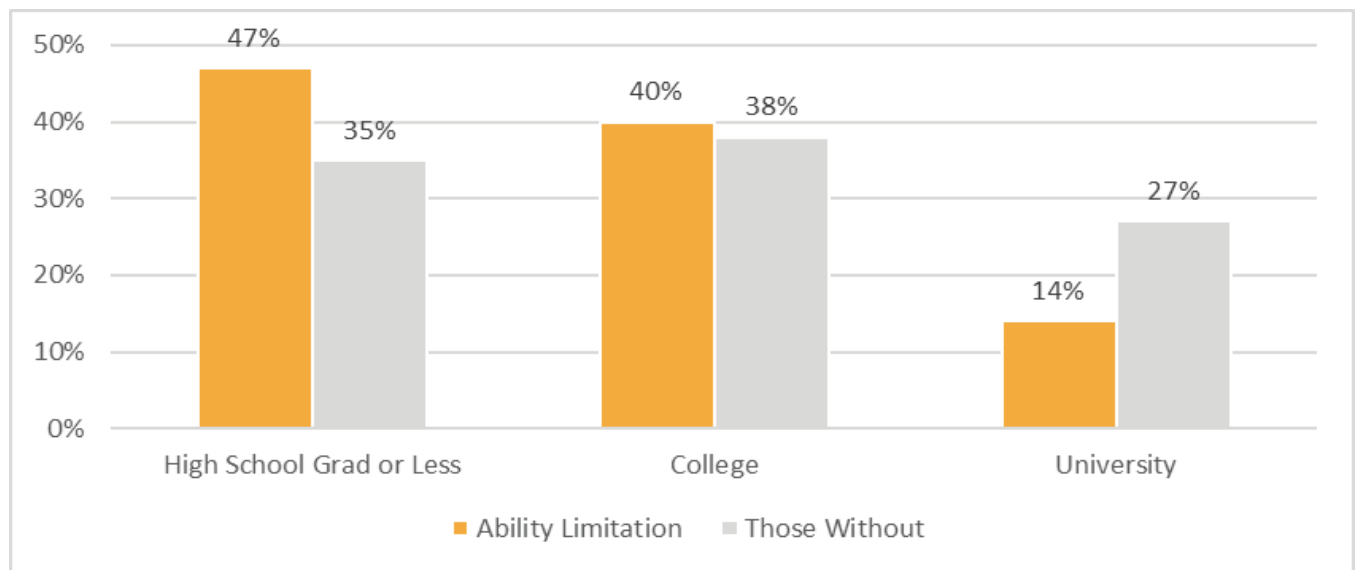
Source Data: Statistics Canada (2012a) Canadian Survey on Disability

Figure 8 shows differences in educational attainment for those with, and without an ability limitation, and demonstrates the differences in high school graduation and university degree attainment.

Other data sets reveal similar historical patterns, such as SLS/F data, which demonstrate *"High school graduates with an activity limitation were less likely to attend university (28%) compared to those without an activity limitation (43%). While there were only minor differences at the college level, overall 32% of graduates with activity limitation did not participate in postsecondary education compared to 22% for those without an activity limitation."* (Butlin, 1999, p. 25)

YITS data shows that 68% of those with a disability had some form of post-secondary activity, compared with 84% of those without a disability (Norrie & Zhao, 2011, p.14). These are higher figures than noted in SLS/F, but they still constitute a nearly identical percentage-point gap (15%). Finnie *et al.* (2011), also citing YITS data, confirm these figures: *"Canadian youth whose parents identified them as having a cognitive or physical disability have an overall PSE participation rate 15.5 percentage points lower than those without a disability. The difference in university participation is even larger: 19.8 percentage points in favor of those without a disability."* (p. 16)

STP data show that only 60% of those with *"other special needs"* during high school transitioned to post-secondary education within five years, compared to 72% in total (Student Transitions Project, 2017, p. 11).

Numerous other studies and overviews identify those with an ability limitation as underrepresented in post-secondary education, for example Smith & Gottheil (2010), Deloitte (2012), and Stonefish *et al.* (2015). ACCATO (2004) identifies *"People with Disabilities"* as one of four *"Key population segments with college access issues."* (p. 11)

Stonefish *et al.* (2015) conclude:

> *Summarizing these data, it is apparent that... students with disabilities have been identified consistently as un-derrepresented. It should be noted, however, that the definition of disability is much broader now than it was 50 years ago, now encompassing students with special needs (e.g., learning disabilities, autism spectrum disorder, mental health issues)* (p. 12).

In recent years, mental health issues have increasingly come to the fore in post-secondary institutions across the country, generating studies, media attention, and both institutional and government initiatives. One of the most significant of these is *"In It Together: Taking Action on Student Mental Health"* (Ontario Colleges and Universities, 2017). Described as *"a comprehensive, holistic approach that includes government, educators, health-care providers and community organizations"* and calls for *"student access to a suite of supports and services that address the spectrum of student mental health needs"* (p. 1). A similar initiative was recently announced for the Atlantic Provinces, by the Council of Atlantic Ministers of Education (Global News, Jan 18), and an important research paper and call to action was recently published by the Canadian Alliance of Student Associations (Waters & Max, 2018).

A truly coordinated approach in BC has yet to emerge, although the 2017 AEST Mandate Letters noted mental health as a Key Commitment for all public institutions. *"Improve student mental health, safety and overall well-being, including creating greater awareness of available supports"* (AEST, 2018a). Some individual institutions such as UBC, UVic, and others, have devoted substantial resources to addressing the need, and indeed virtually every public institution in our scan had either on-site or referral mental health services available.

To be clear, access to post-secondary for students with mental health limitations is not a representational issue in the same sense, say, that participation of those with cognitive or physical ability limitations is. The increasing attention being given to mental health on campus and the multiplicity of initiatives to address concerns speak to its increasing prevalence, rather than any underrepresentation of those so afflicted. Indeed, Waters & Max (2018) estimated between 18% and 45% of students were either under professional care, had been prescribed a psychiatric medication, or had experienced a significant mental health issue in the course of their studies. While not indicative of underrepresentation in the context of this paper, mental health is, however, an aspect of ability impairment that urges attention through all available means, including policy, services, coordination of effort, and increased funding.

Men, Women, or LGBTQ persons

Gender

Post-secondary education representation by gender is a prime example of an issue that has metamorphosed over time. The earliest concern of educators and policy-makers was to provide equity of access for women to post-secondary opportunities. Early educational participation for women was centered upon a handful of disciplines in such areas as teaching, nursing, and business office occupations. In 1920, men's representation in university studies was five times that of women (Mouelhi, 1995, p. 37). It was in the 1970's that women's participation first began to surpass that of men in certain categories (e.g., part time undergraduate studies). As well, it was only during the 1980's that the crossover occurred in other categories, such that women's representation exceeded that of men, overall. In 1987 women's undergraduate (university) full time enrolment surpassed that of men (215,217 vs 212,590).

This phenomenon was widely noted at the time: see Guppy & Pendakur (1989) for a review of the recent literature of the day. Subsequently, it became the subject of much scholarly research in its own right (e.g., Mouelhi, 1995; Butlin, 1999; Barr-Telford *et al.*, 2003; CCL, 2009; Turcotte, 2011a); and has since become normalized as a known feature of the post-secondary landscape. Recent figures indicate that the overall differential between males and females in post-secondary education participation, is six percentage points in favor of the latter: at approximately 62% (Statistics Canada, 2016).

The PSIS figures shown in Figure 9 above are slightly lower than those taken from the Census, as they pertain to a different sample, but allow comparison over a ten-year period. The graph shows that the percentage of women has declined marginally in university studies, but that women remain in the majority in both college and university participation.

Few would argue that men form a large underrepresented block within post-secondary education. On the contrary, the population of men and women is heterogynous, and their pathways to and through post-secondary education are complex (e.g., Andres, 2012). Where the focus of the research and literature currently lies, is in the examination of those areas where inequality of participation and representation – of both genders – is still seen to exist.

It is well known that men predominate in the trades and STEM disciplines (Burke & Mattis, 2007) while women are more highly represented in health, allied health and human services areas (Turcotte, 2011a). The gender underrepresentation by program area found in other data sources is reflected in BC Student Outcomes surveys. For example, from the 2015 BGS we learn that only 26% of the respondents from Engineering & Applied Sciences are female, and only 15% of the respondents from Health programs are male. From the APPSO survey, the wide gender discrepancy for women in trades is revealed, as only 6% of the respondents from traditional apprenticeship programs were female (BC Student Outcomes, 2016).

FIGURE 9: Canada Post-Secondary Participation Percent Female by Level 2005 & 2015 PSIS
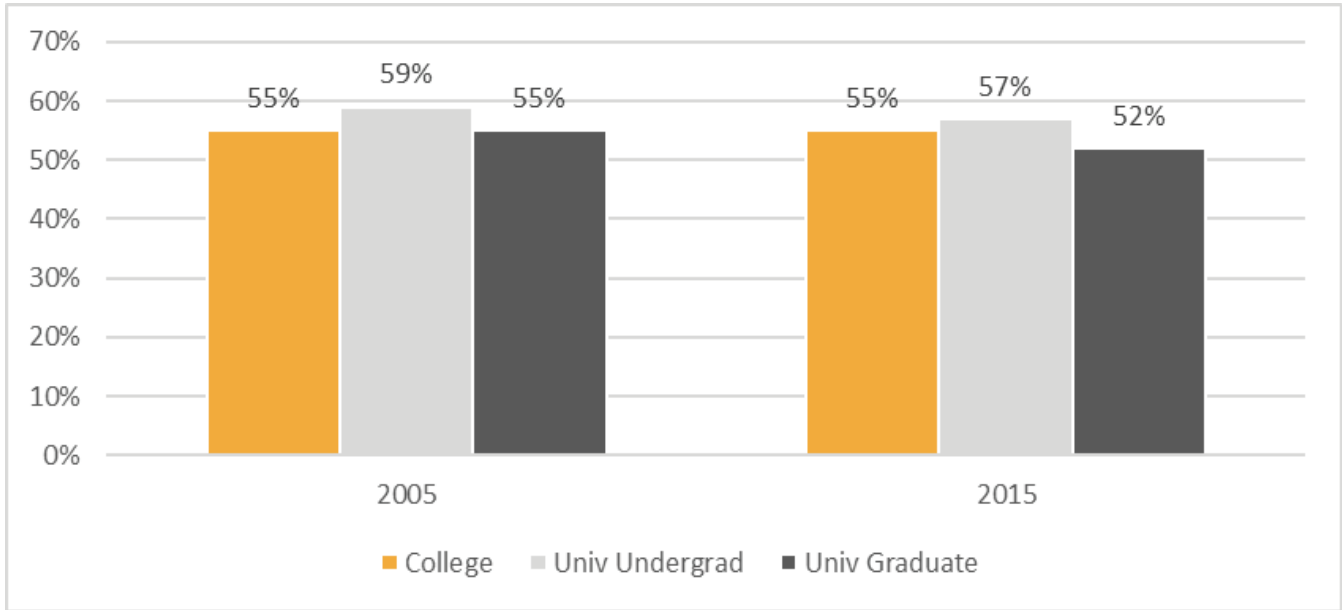
Derived from Statistics Canada CANSIM (2015a)

Although most would ascribe these differences to underlying and slow-changing societal proclivities, they are none-the-less amenable to address through policy, practices and other means at the government, institutional and pro-grammatic level.

The literature examines other correlates that provide insight into the possibilities for policy and practical change. For instance, Indigenous men are seven percent less likely than Indigenous women to attend post-secondary institutions (Mendelson, 2006, p. 14). As noted above, those with child-rearing or other dependent care responsibilities, are predominantly women (Tomkowicz & Bushnik, 2003, p. 11), and are about half as likely to participate in post-secondary education (Lambert *et al.*, 2004, p. 9). As well, McDonagh (2004) argues that attitudes among some ethnic communities or recent immigrants, may condition, for both women and men, choices, pathways, and participation in relation to education and work:

> *"Yet for some women, barriers to education still exist: their family and traditional culture, their poverty, their children and husband. Their free choice may be limited by the kind of background they have, both in and out of school in their early years."*

> *"Girls and women are often discouraged from continuing their education by the cultural group they grow up in. Even in Canada some families have negative attitudes towards educating girls..."* (p. 1)

LGBTQ Persons

The other aspect of gender coming increasingly to the fore, explored in the literature and manifested in on-campus initiatives, pertains to those with non-binary gender, and on-the-spectrum sexuality identification. The shorthand label for this broad range of identities is "LGBTQ", representing individuals who identify as lesbian, gay, bi-sexual, trans-gender or queer.

This is another example of a group issue that has evolved considerably over time. Historically, LGBTQ individuals suf-fered singularly, anonymously and silently, the abuse and discrimination of student peers, and those in positions of power on campus. Increasingly, basic personal rights are being asserted, and demands for freedom from harassment, and equal treatment in the educational experience are being heeded. This assertion of rights and demand for equality, is coming about as individuals coalesce into communities of interest, and express legitimate demands as a group.

An extensive literature speaks to the negative campus experiences of LGBTQ people. These experiences run the gamut from isolation and exclusion, through discrimination and disrespect of rights, to abusive behavior and in some cases, violence (e.g., Beemyn, 2008; Rankin, 2003; Rankin *et al.* 2010). Such experiences can be perpetuated by institutional factors: "...*students experience discrimination because of gender-exclusive policies and practices: health care, residence halls, bathrooms, locker rooms, records and documents, public inclusion, and programming, training, and support."* (Beemyn, 2008, p. 1)

Much of the literature is aimed at improving campus policies, practices and climate with regard to LGBTQ students, and to engaging to create positive and successful educational experiences (e.g., Stewart & Howard-Hamilton, 2015). However, this remains, greatly, a work in progress:

> *"Each of the participating institutions has in some way publicly committed to supporting GLBT people on campus, and yet this report documents that many GLBT people on these campuses continue to experience discrimination, harassment and/or isolation. In fact, almost a fifth of respondents had feared for their physical safety in the last year because of their sexual orientation or gender identity, and 43 percent considered the climate of their campus to be homophobic."* (Rankin, 2003, pp. 5-6)

While the literature addresses the experiences of LGBTQ students on campus, and the efforts of institutions to ameliorate negative factors, access, participation and representation in post-secondary education are almost never addressed. The fundamental reason for this is a lack of data. On the one hand, neither Canada nor the US include non-binary gender, or spectrum sexuality questions in the Census. What little data that does exist, comes from largely local surveys, that lack the representative scale to provide national estimates. Robinson (2002), noted a number of these studies for the US, which variously placed the estimate of America's "homosexual" population at between 3% and 10%. A Forum Research poll (National Post, 2012) estimated that 5% of Canadians identify as lesbian, gay, bisexual or transgender. A more recent study, perhaps more relevant to the post-secondary age population (Jones & Cox, 2016), placed the LGBTQ population among American millennials at 7-8%.

Institutions have been slow to consider non-binary gender options on application forms and questionnaires. While changes may be feasible (e.g., Scott & Dennis, 2017) and the BCREG motion relating to common language for gender identification), for the most part we have no definitive data for either post-secondary participants or for the overall population. Neither the numerator nor denominator of the equation is available. However, regardless of the availability of objective data, few would argue that 5%, much less 7% or 8% of campus populations, identify themselves to educational providers as LGBTQ. As well, LGBTQ persons are treated as a marginalized population in many ways, as we have seen. For these reasons and in the absence of information to the contrary, we will treat the LGBT group as underrepresented for the remainder of the paper, and our exploration of institutional policies and practices.

First and Second-Generation Immigrants, Minorities, Language Barriers

For some, the characterization of an "underrepresented" or "equity" group turns in the first instance, to the classic sociological categories of ethnicity and minority language, and related descriptive dimensions of the immigrant population. It is therefore revealing to note that in the literature, for the most part and with some exceptions, ethnic minorities, minority language speakers and recent immigrants are not seen as underrepresented in post-secondary education. That is to say, where underrepresentation does occur, it manifests in particular contexts and subpopulations only.

Immigrants

Berger *et al.* (2009) sum up the situation with regard to the immigrant population:

> "*The Census tells us that, as a group, immigrant Canadians have a higher educational attainment than Canadians born in Canada. … Fifty-one percent of immigrants who arrived between 2001 and 2006 had a university degree, compared to just 20 percent of the Canadian born population. Furthermore, this most recent wave of immigrants has a higher level of educational attainment than the population of immigrants that preceded it. …While new immigrants are more likely to have completed a course of university study, they are less likely than individuals born in Canada to have studied at a college (11 percent vs. 22 percent) or to have completed a trades certificate (five percent vs.14 percent). Immigrants account for roughly one-quarter of the working-age population (25 to 64), yet they hold 49 percent of Canada's PhDs and 40 percent of its master's degrees.*" (p. 55)

> While the literature addresses the experiences of LGBTQ students on campus, and the efforts of institutions to ameliorate negative factors, access, participation and representation in post-secondary education are almost never addressed.

Others who have studied Census data, including Munro (2014), reinforce this perspective. However, Census data speaks to the educational attainment of immigrants, but not necessarily to participation in Canadian post-secondary education. For that we may turn to YITS and SLID data that portray the transitions of youth from secondary to post-secondary education in Canada.

Within these data sets we can distinguish first and second-generation immigrants:

"i) those who came to this country as immigrants themselves but arrived early enough to complete their primary schooling and take advantage of PSE opportunities in Canada and ii) those who were born in Canada to parents who were immigrants." (Finnie & Mueller, 2009, p. 4)

Finnie & Mueller's results mirror those of Berger and others studying Census data. Both groups are considerably more likely to attend post-secondary than non-immigrant youth. While 72% of the latter participated in post-secondary education, 86% of first generation immigrants, and 84% of second generation had participated. Differences are principally in university participation rates, which are 20% higher for first generation children of immigrants and 16% higher for second generation, versus college or trade school attendance where immigrants are underrepresented five percent or more (Finnie & Mueller, 2009, p. 9). Other studies using YITS and SLID data, note these same overall patterns, including Norrie & Zhao (2011, p. 29).

FIGURE 10: Educational Attainment – Percent Immigrants & Non-Immigrants YITS 2002-2006
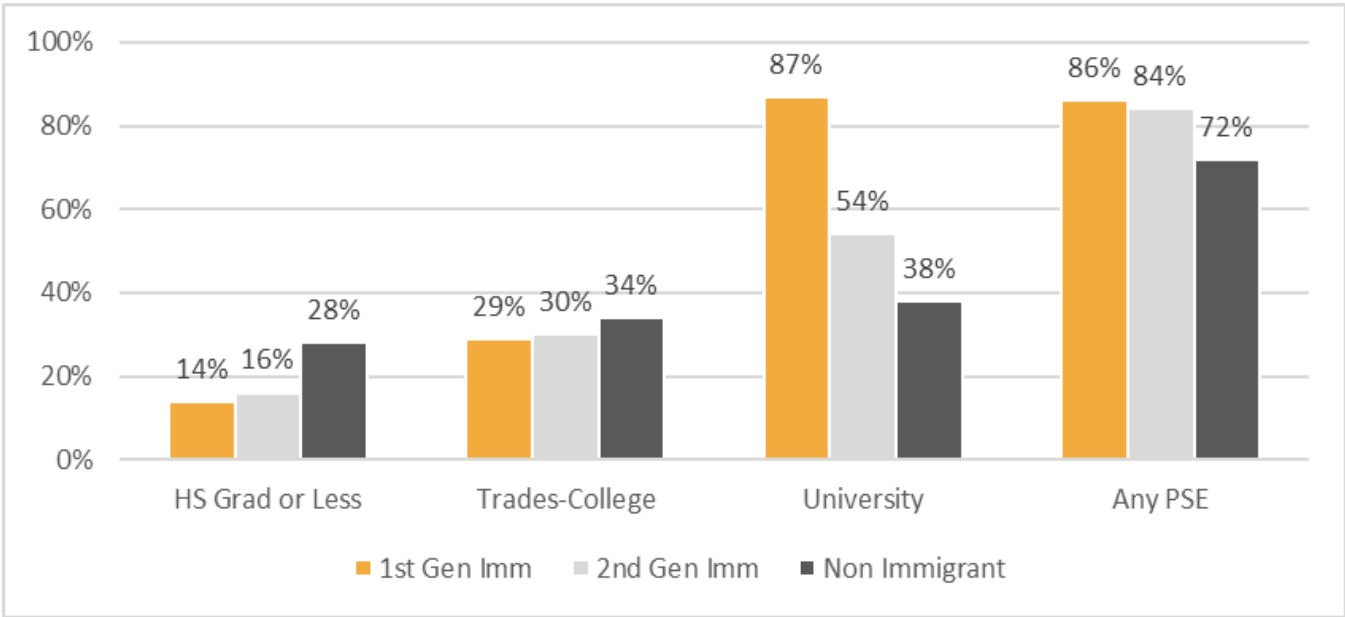
Source Data: Finnie & Mueller (2009)

Figure 10 shows the educational attainment of immigrants and the non-immigrant population, and it demonstrates lower attainment of immigrants, vis-a-vis trades and college certifications, and greater university degree attainment.

One important perspective sees immigrant post-secondary participation as an employment integration issue. Again, speaking of recent immigrants, most are highly educated prior to arrival in Canada, with about three-quarters having a postsecondary education or trade certificate. However:

> *"For many immigrants, the work experience, skills and education they bring to our country are mostly underutilized or not utilized at all…. In fact, 43 per cent of immigrants had enrolled in at least one training program in Ontario, including language training (68 per cent), postsecondary courses (23 per cent) and job-related courses (nine per cent). At the same time, many immigrants have weaker literacy and communication skills and their educational and occupational credentials are often not recognized by Canadian institutions and employers."* (ACAATO, 2004, pp. 18-20)

The implication here is that although they may be highly skilled and credentialed, immigrants find they must attend Canadian institutions to obtain needed language levels, or to additionally certify their knowledge and skills.

Ethnic Minorities, Non-English First Language

YITS data also speaks to participation of visible minorities, and notes that 76% of those identified as part of a minority ethnicity went on to some form of post-secondary education, versus 71% that were not so identified. As seen above with immigrant data, the difference is in university attendance (43% vs. 31%), whereas college attendance was 31% visible minority vs. 36% among those not so identified (Lambert, 2004, p. 9).

In the 2001 Census, approximately 16% of the target-age population are visible minorities while survey data show figures both above and below this benchmark (Junor & Usher, 2004). Using several national and provincial college and university surveys reveals that more university students than college students identify themselves as visible minorities (p. 56). Some variation in percentage participation among particular ethnic groups is noted, and they conclude that *"post-secondary participation patterns for most ethnicities are roughly in line with their share of the population"* (p. 58). Finnie and Mueller (2009) note that the patterns of first and second-generation immigrant post-secondary participation vary by source country but generally exceed those of the non-immigrant population. The literature is more mixed with regard to participation of minority language groups, and those specifically with ESL backgrounds.

Language limitations are more significant. Ontario high school graduation data shows that the proportion of students with an ESL course who did not graduate at the end of five years was 13 percent higher than those with no ESL background (King *et al.*, 2009). They also noted that: *"Proportionately fewer ESL students than other students registered in college and university, and nearly twice as many ESL students left before their fourth year."* (p. 118) Interestingly, they note that the pattern of participation, favoring university over college (15% vs. 26%), and was the same for immigrants and visible minorities (p. 117).

We see that students from some language groups are more likely to attend university, and others college. Students from Chinese, Korean, Russian and South Asian language backgrounds were least likely to enrol in college, and most likely to enrol in university. Students who spoke Tagalog or French in their homes were more likely to register in college (King *et al.*, p. 121).

Those whose mother tongue is not English also show the same patterns of overrepresentation in university and underrepresentation in colleges and other forms of post-secondary. This population *"likely overlaps the immigrant population"* (Norrie & Zhao, 2011, p. 29).

Heslop (2010) citing STP data notes *"Students whose primary language spoken at home is not English or who were en-rolled in English as a Second Language (ESL) in their graduation year have higher overall student transition rates than students whose primary language is English."* The STP regularly reports on BC student transitions to post-secondary education by mother tongue. These data show that listed non-English languages have higher transition rates than English (71%), including French (75%), Chinese (82%) and Punjabi (88%). The sole exception and outlier here was Korean, at 52% (Student Transitions Project, 2017, p. 11).

While the data that Heslop presents does not distinguish between university and college participation, it agrees with the majority of findings noted above: that generally, recent immigrants and ethnic and linguistic minorities are highly credentialed and are positively represented in post-secondary education overall. The majority of studies have also revealed however, that immigrants are over-represented in university participation and under-represented in colleges and trades or vocational institutions. As well we can summarize by saying that whether seen in terms of immigration status, language, or ethnicity, we are viewing a consistent pattern of post-secondary participation.

It should be noted however, that Stonefish *et al.* (2015) cited those with English as Second Language (ESL) back-grounds as an underrepresented group, in their study of Ontario college recruitment. Also, Deloitte (2012), and Smith & Gottheil (2010), cited Children of Immigrants (1st or 2nd generation) as underrepresented.

Other Groups

There are other groups identified in the literature that are not included in the following review of policies and prac-tices, as it was determined that the evidence was not sufficiently compelling to further include in this paper. That is, the following groups are not considered underrepresented in the context of BC public post-secondary education.

Delayed Entrants. Mature Entrants

One of the studies reviewed mentioned delayed entrants as an underrepresented group in post-secondary education (Deloitte, 2012). The sense here is that individuals are "delayed" in completing high school or entering post-secondary education, because of grade failure, or drop-out or stop-out, of the normal, or on-cycle educational sequence. This may mean that applicants are entering post-secondary institutions through "Mature" status, and while it does not necessarily coincide with a lack of high school graduation, it frequently does (McQuarrie 2013, pp. 17, 18).

McQuarrie (2013) provides an extensive overview of late entrants, and the types of policies institutions have put in place to accommodate them. In very broad terms, these usually include a minimum age requirement (e.g., 21) and non-participation in secondary-level studies for some period of time. Mature entrants may or may not fully meet academic requirements for institutional or program entry (p. 18). McQuarrie (2013) emphasizes the great diversity of this type of entrant, whose only common characteristics are, at base, an age threshold and admission status.

The examinations above have revealed, at the very least, that access, participation, and representation are not unitary concepts in relation to any of the groups we have discussed, or the barriers they face. Studies have revealed large gaps in access in relation to income and finances, but these are mediated by parental education, cultural, and motivational factors.

However, while McQuarrie and other authors provide valuable insight into the mature entry student, and the attendant policies and practices of institutions, we could find no evidence in the literature that they represent an underrepresented group, in and of themselves. As such, we have not retained mature entry learners for further discussion in this paper.

Religion and Religious Minorities

The vast majority of the Canadian literature on religion and religious minorities in education, is concerned with equity of access for Catholic and Protestant minorities, mainly in Quebec and Ontario. This more commonly has a primary-secondary education focus (e.g., Hoverd *et al.*, 2015), or is concerned with the transition from parochial school to post-secondary education (e.g., King *et al.*, 2009).

Obviously, in the faith-based institutions in BC and elsewhere, those from a different faith or denomination would be "underrepresented"; however, there is no evidence from the literature that religious groups are underrepresented in the secular institutions across Canada. None of the numerous studies reviewed found such a deficit, and an extended search of the literature revealed no study that identified any religious group as underrepresented in Canadian post-secondary education overall.

On the contrary, one of the few comprehensive studies, conducted by the Pew Research Center (2016), shows for the US and Canada, that although differences are small, minority religions (Muslims, Jews, Hindus, Buddhists) have slightly higher levels of educational attainment (mean years of schooling) than Christians. Differences are in the 1% to 2% range even for Buddhists, who are the least represented group in post-secondary education (p. 151).

Summary of Literature Findings

The examinations above have revealed, at very least, that access, participation, and representation are not unitary concepts in relation to any of the groups we have discussed, or the barriers they face. Studies have revealed large gaps in access in relation to income and finances, but these are mediated by parental education, cultural, and motivational factors. Gender disparities are highly program-specific; the outcomes of family structure vary by gender; and many groups, such as immigrants and ethnic minorities, are underrepresented in certain educational paths but not in others. Many, and here we speak most explicitly of Indigenous people, are underrepresented on a variety of dimensions, and many face multiple barriers to post-secondary participation.

Our review of the research literature allowed us to claim that mature entry, mental health (as opposed to cognitive limitation), and religion are not discriminating features of underrepresentation. It has also allowed us to clarify our thinking in terms of the nature and characteristics of the remaining groups and subgroups, and to refine, as well, our understanding of the factors or barriers they face.

In this context, for each of the remaining groups and subgroups we have attached a word or phrase that summarizes the barrier or factor most pertinent to each, recognizing that these dimensions may themselves be complex:

1. **Poverty:** Those from low income, or socioeconomic status backgrounds, or facing financial barriers
2. **Parental Education:** First generation post-secondary learners, or those with low parental education attainment
3. **Preparation:** Those with low secondary school success, or who are underprepared for post-secondary study
4. **Family:** Family or dependent responsibilities, non-traditional family structure; Former Youth in Care
5. **Indigenous Identity:** Including First Nations (Status and Non-Status), Metis, and Inuit
6. **Location:** Those from rural locations, or living some distance from post-secondary institutions
7. **Gender:** Men or women in specific contexts, gender-based role barriers, or LGBTQ persons
8. **Ability Limitation:** Those with a recognized disability, or other physical or cognitive constraint
9. **Cultural Distinctiveness:** Recent immigration, minority ethnicity, or English language barrier in specific context

These groups and their barriers might be categorized in terms of: i) conditions an individual is born into; ii) conditions of situation; and iii) personal conditions. This is important because while some barriers or factors may be amenable to change, others are not and must be addressed in other ways. For instance, both poverty and lack of preparation are constraints that are possible to address by changing an individual's situation, e.g., through financial aid or remedial studies. However, an ability limitation is for the most part inherent, and must be accommodated for what it is. In some cases, individuals face a number of conditions of various types, and institutions must work sensitively and diligently to help overcome or accommodate multiple barriers.

These groupings are discussed below in terms of the policy context as identified by the institutions on their websites, the surveys completed by institutional research officers, and in interviews conducted with admissions and other personnel. Two considerations about this list might be useful, before we examine each in detail in the policy and practice context.

Firstly, one is struck by the fact that, while some underrepresented groups are clearly "groups" in a social or sociological sense, others are much less cohesive or readily identifiable as such. For instance, Indigenous peoples, be they members of a First Nation, Metis or Inuit, are none-the-less identifiable, or self-identify to institutions, based specifically on their group membership. To a certain degree, the same is true for ethnic identification, one with a designated disability, or perhaps someone who self-identifies as LGBTQ. Then there are individuals that share common traits, but do not form a cohesive group, including first generation learners, caregivers, those who are academically challenged, or from rural origins. These are more "statistical aggregates" than "sociocultural groups" in the sense noted above.

This also matters, because there are great differences in the visibility and activism at the two poles of the identity distribution, a fact that influences policy. Substantially cohesive groups who are self-aware and share a mutual identity are often documented and entitled to services and programs. At the other pole are individuals who may be essentially invisible to institutions, unless the institution makes a conscious effort to identify, reach out, assess, and address their needs. While the general parameters of underrepresentation might be understood, as there is no overtly identifiable group, it may be that the best the institution can do is assist individuals to identify their need, and to offer services in response.

Secondly, while members of the underrepresented group may be statistically or otherwise identifiable, the specific nature of the barrier facing an individual is not always obvious. Or, if the impediment is understood, it is not necessarily clear what actions institutions or even governments might take to address it. An example here is the first-generation learner, whose barriers we saw above to be a complex of familial attitudes, cultural proclivities, and motivational factors. Other examples include gender identity issues or inequality, or attitudes towards visible minorities, which originate in the broader social milieu and which institutions have little ability to influence.

> These groups and their barriers might be categorized in terms of: i) conditions an individual is born into; ii) conditions of situation; and iii) personal conditions. This is important because while some barriers or factors may be amenable to change, others are not and must be addressed in other ways.

The Groups in Policy and Practice

Introduction

In forming the analysis below the authors scanned websites and other digital documentation for the thirty-eight institutions of the BC Transfer System, as well as Ministry of Advanced Education, Skills and Training webpages and documentation, and those of selected other BC ministries, agencies, and public bodies. Of the BC Transfer System institutions, twenty-five are public (11 colleges, 3 institutes, 6 research and 5 teaching universities), eleven private institutions (4 universities and 7 colleges) and two are out of province (1 college and 1 university). We also sent a survey about related data to the twenty-five public institutional research offices, receiving twenty responses from fifteen institutions; and interviewed admissions and other personnel from seven representative institutions.

An overall observation as we embark on a discussion of policies and practices in relation to the nine underrepresented groups, is that the terminology of "underrepresented", or "underserved" or "equity group" in relation to subpopulations was comparatively rare in institutions. These terms were not found in policy statements in any of the thirty-eight institutions reviewed. This was true even though in a great many cases they had targeted policies, programs or services to the groups identified in the literature. In other words, it was the terminology that was absent, not the substantive policy, program or service to support access and equity. On the other hand, when asked, about half of the (mainly public) institutions indicated that they could identify groups as "underrepresented" or "underserved". This designation was typically revealed in institutional research, strategic or other planning documents, some accountability reports, and occasionally in transcripts of speeches or other transitory material.

One type of policy statement was common, and versions were found in most of the public institutions. This was a "Diversity" or "Non-Discrimination" policy speaking to inclusiveness, cultural and other diversity, non-discrimination, equity, often access, and sometimes "breaking down barriers to services". The statements are similar across institutions and commonly reference a number of identities and characteristics, typified by the following from Royal Roads University:

> "These identities include but are not limited to race, ethnicity, culture, nationality, linguistic origin, citizenship, colour, ancestry, place of origin, creed (religion, faith, spirituality), family status, marital status, ability or disability, sex, gender identity, age, sexual orientation, education, style, socio-economic class and political belief."[9]

While the language of underrepresentation is absent, and the characteristics go beyond those of the groups identified in the literature, these none-the-less constitute strong statements in favour of access, inclusion and equality, and are made by most public institutions in BC.

Not all BC institutions take the same approach to policy development, and as we scanned institutional websites and other material we noted that some policy frameworks were systematic and rigorous, and others less so. In many cases we found formal policies that were pertinent to a group; in the sense of a general or admission policy embedded in a Board approved policy framework. In other cases, we found "policy-like" statements that seemed to carry equivalent weight to policy, we have included those in the following discussions.

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[9] Royal Roads University (n.d.). Our Diversity Statement. Retrieved from http://www.royalroads.ca/diversity

Typically institutions have responded to access and equity issues in three main ways:

1. **Programmatically -** by creating new or expanded programming, or sequestering capacity within existing programming, to meet the needs of underserved populations;

2. **Through services** - that identify and out-reach to, or otherwise seek to enhance access by and engagement of, those populations; and

3. **Through policy and practices** - that provide both the framework for and practical implementation of measures that also facilitate participation of underserved groups.

Usually responses to reduce barriers and increase access do not stand in isolation, but typically are found in combinations and weightings within an institution in relation to various sub-populations. Other factors may condition institutional responses, including government policies and/or funding priorities that give clear direction and support to institutional practice, such as the *"Aboriginal Post-Secondary Education and Training Policy Framework"*. In relation to the LGBTQ population, we have seen that the degree of "empowerment", "visibility" or "tangibility" of the group itself is important, especially as they self-identify and voice their needs to boards, administrations, service departments, or even the press. Lastly, academic and institutional research findings and SEM initiatives may lead institutions to specifically and actively seek out underserved groups within their reference populations, in order to fulfill service or strategic mandates.

Several of the institutions have SEM or engagement initiatives, which specifically seek to "engage" the student (especially the potentially marginalized student) with the institution through a variety of means. These include classroom and program activities, academic alert, extra-curricular activities and student activism among others. While SEM or engagement programs are not greatly developed in most institutions we scanned, many had some form of initiative(s), and we noted a few who had an office or committee specifically charged with student engagement.

Thus, the identification of underrepresented groups will vary from institution to institution based on a variety of factors, including government priorities, institutional mandate, geographic location, developmental history and priorities, awareness of and sensitivity to research, and degree of proactivity and/or response to expressions of need by groups themselves.

Poverty:

Those from low income or socioeconomic status backgrounds, or facing financial barriers

At the policy level, none of the institutions had designated low income or low SES students as an underrepresented group, however several institutions' policies referenced "those in need" or "financial barriers" to students. UBC has a policy that no otherwise-qualified applicant will be turned away because of financial need.

The most common form of support for those from low-income backgrounds, or facing financial barriers, is the system of government-funded Student Financial Aid, and that of non-government awards administered by the institutions. Our scan of the thirty-eight institutions revealed that sixteen had formal policies that pertained to government-funded financial aid or to other types of awards. The sixteen institutions included fifteen BC public institutions and Yukon College.

> *The most common form of support for those from low-income backgrounds, or facing financial barriers, is the system of government-funded Student Financial Aid, and that of non-government awards administered by the institutions.*

Whether or not they themselves had such policies, all of the BC public institutions provided government-funded financial aid services administered through StudentAid BC (SABC), under the StudentAid BC and Canada Student Loans policies. Students attending private institutions that are designated by StudentAid BC can also qualify for government student aid.

Most institutions make a range of internal bursaries and scholarships available to their students, often funded through endowments and donor gifts. All or most public institutions have Foundations that solicit donor gifts and fundraise to support these internal awards. External awards are also accessible through institutional Financial Aid offices and BC Awards Online. Many awards target specific groups of students with particular characteristics, histories or goals. All, in one way or another, provide a financial benefit and address a financial need, fostering access and continuation along educational pathways.

All institutions scanned, both public and private, provided an array of internal awards, and links or other access to external awards. Again, many were for students with specific characteristics or study paths, for example former youth in care, women in trades, single parents, students with disabilities, or local students from rural regions (an example of the latter is a recent NVIT policy to offer high school graduates within the Nicola-Similkameen region a year of free tuition[10]). Indeed, among the public institutions at least, awards support can be found for virtually all of the underrepresented groups identified in this study. (In the sections below, we note examples of awards available to each group, in addition to government or agency funding streams.)

In the majority of cases these awards are for students in progress, but all of the universities, most colleges and most private institutions have entrance awards as well. Most institutions provide emergency bursaries to current students in critical need, and a few institutions support tuition deferrals on a case-by-case basis. Most institutions seemed willing to go to significant lengths to support current students in financial difficulties, and to avoid dismissal for financial reasons.

Other than entrance awards, institutions did not appear to have admissions practices aimed specifically at those facing financial barriers.

All of the public institutions were seen to provide an array of services that support and assist students, post-admission, in application for and in disbursement of financial aid and awards. Provided through Financial Aid offices, generally on each campus, most also provide support, through counselling and tutorials, published or web-based materials, for personal financial planning, budgeting and accessing community resources. Such services were less apparent in the private institutions, and where they did exist, seemed less developed.

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[10] http://www.nvit.ca/news/immediateentrybursary.htm

Another support for low-income students or those in financial need is campus-based student employment opportunities. While almost all public institutions offer some opportunities for students to work on campus, a number have formalized Work-Study programs that offer employment on-campus. Employment criteria are both skills-based and needs-based, and these opportunities provide students in need with the means to augment finances.

Our scan revealed that student societies on most campuses provided support for students in need, as far as they could with limited resources. Usually aimed at those who had "fallen between the cracks" or otherwise in dire need, many student societies also operate food-banks and/or clothing-banks, supported by donations. For many, student poverty is very real, and it is all too often the fellow student, kind faculty or campus staff member, that provide assistance of last resort.

In summary, it appears that individuals from low-income backgrounds or facing financial barriers are comparatively well served through the government and institutional-based policies, services, and supports discussed above. Indeed, facilitating, providing or augmenting the means to attend post-secondary education is a major function for the institutions, at least in the public sector. However, the juxtaposition here comes in taking the group perspective. While governments and institutions do well to meet individuals' needs, those from low income or socioeconomic status backgrounds, or facing financial barriers remain underrepresented as a group, in BC and in Canada, today. The nomenclature of underrepresentation and group identity is largely absent; no institution had designated the financially challenged in this way, and only four institutions collect information on student personal income, while three collect student parental income. One is led to suspect that true equity will only come when institutions, and advocates such as student societies, frame the issue not from the perspective of the needy individual, but from the politics of poverty and the underrepresented and underserved group.

Parental Education:
First generation post-secondary learners, or those with low parental education attainment

If there continue to be visibility issues with those from low-income backgrounds as an under-represented group, first generation learners or those with low parental education attainment are even less visible. This comes in the face of the substantial weight of research literature that parental post-secondary attainment is likely the primary determinant of the next generation's participation in post-secondary education, and that the first-generation learner is possibly the most underrepresented of all.

Despite this volume of research, no institution designed the first-generation learner as underrepresented, and they do not appear in policy statements. No government mandate, policy or study is concerned with them, and no private institution could be found to reference them in any context.

The first-generation learner does appear in a number of public institutions in studies and data, and in planning documents and reports related to SEM and similar initiatives. Three public institutions reported identifying the first-generation learner on application forms, while eleven others get this information from surveys. Also, nine institutions collect information on parental post-secondary education through surveys (both NSSE and CSSE include such information).

Hearteningly, the other area where the first-generation learner appears is in bursary support. Our scan found entrance awards or bursaries in seven institutions, and TRU provides such support specifically for first generation Aboriginal students as well. Okanagan College identified first generation applicants on their application form, provide advising and counselling support, and offer bursaries support for these learners.

The path to greater success for this group has been well charted in the literature and SEM practice, and institutions such as Okanagan College have made a substantial start. While anonymous survey data may generally inform, institutions might identify first generation learners through applications or recruitment forms. They could provide incentives, supports and accommodations, including specialized advising and counselling if needed. Drawing from Bourdieu (1985) and others, we view these efforts as attempts to overcome cultural and motivational issues, and in many cases personal fear about post-secondary with this population. This speaks to high-touch processes, and this is one area where, in taking care of the individual, the underrepresentation of the group can also be addressed.

Preparation:
Those with low secondary school success, or who are underprepared

All institutions have policies that determine requirements or eligibility for post-secondary level study, including alternates and equivalencies. They will also generally have policies or processes that delineate options if eligibility criteria are in doubt, usually making use of assessments and specifying remedial routes when requirements are not met.

All of the colleges and most teaching universities have extensive offerings in Math and English, and pathways for learners with different needs. The colleges have a direct mandate under the College and Institute Act (S5.1) (AEST, 2018c) to provide developmental education, and the teaching universities also have this mandate under the Universities Act (S47.1) (AEST, 2018d). In both types of institutions, the basic or reference requirement to commence post-secondary level study is BC high school graduation or an equivalent. In addition, English language proficiency as BC high school English 12 (C or better) or equivalent is required.

If a student can document entrance requirements through transcripts s/he may move on to program selection that may involve additional admissions criteria. Underprepared students, including non-graduates from high school, are able to access post-secondary education in BC, but they may be required to upgrade their skills before entering post-secondary level programs. Assessment serves to place the student at a level where s/he can effectively resume learning, and if the placement is at a secondary school level it usually means a delay in post-secondary study until the learner "upgrades" or "develops" the needed skills. A number of institutions offer a hybrid model whereby learners may move forward into post-secondary level study at the same time that they upgrade in specific areas.

Many of the public institutions scanned also provide an admissions route whereby program entry can be gained by special assessment of life and work experiences. In these cases, the applicant usually applies to a program as a mature student, and then undergoes an interview and provides documentation that is assessed by the Dean, Department, or a committee. If successful, formal entry requirements may be waived and the applicant admitted.

Two BC government web publications BC Adult Graduation Diploma Program[11], and High School Courses for Those Already Graduated[12] provide key information and guidance, including course equivalencies across the high school and post-secondary levels. Each institution has a protocol regarding departmental responsibilities for aspects of the admissions process for underprepared students. Often the more "high touch" aspects are facilitated by a Developmental Studies department, which often have Help or Welcome centres, and invariably have well-trained and skilled faculty and staff to assist.

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[11] https://www2.gov.bc.ca/gov/content/education-training/adult-education/graduate-high-school/bc-adult-graduation-diploma-program
[12] https://www2.gov.bc.ca/gov/content/education-training/adult-education/adult-upgrading/already-graduated

Institutions provide a range of services beyond courses and programs that assist the underprepared student in many ways. At the public institutions, these often include a full range of supports: admissions help, educational advising, course planning, career and educational counselling, tutoring, study skills, learning skills, research skills, writing skills, life skills, personal counselling, wellness and mental health support. Most of these are available with some variation at all institutions; they are open to the general campus population, while geared to those most in need. The underprepared learner stands to benefit significantly from such services.

The provincial government in 2017 mandated that ABE and ESL programs be tuition-free for domestic students, and it provides support for these through renewed funding. Financial Aid for Developmental Studies or ABE students is available from SABC, and through a variety of non-government awards. The Adult Upgrading Grant (formerly ABESAP) covers (as applicable) tuition, deposit, student fees, textbooks, and childcare support. Virtually every public institution has bursaries and other awards that these students may apply for. Some, such as the Southern Interior Development Initiative Trust, are regional.

The research universities not only require BC high school graduation or equivalent for admission, but also a competitive GPA. They explicitly do not therefore address the needs of the underprepared student as part of their mandate. However, UVic and seemingly other research universities have multiple pathways toward entry, and demonstrate some flexibility depending on the applicant's background and characteristics. For example, UVic offers sixteen different ways to demonstrate English entry requirements; and SFU has a Diverse Qualifications Admission policy[13]. Also, three of the research universities (UBC, UVic and UNBC) provide some English and math upgrading instruction through their continuing studies arms. This is "pre-admission" study and usually must be completed prior to admission to a post-secondary-level program.

Two of the three institutes (BCIT and NVIT) offer developmental studies or upgrading courses of their own, while the third (JIBC) partners with the Native Education College to provide upgrading for students going on to JIBC technical programming. BCIT's program is relatively small, while NVIT provides campus-based assessment and related services, a comprehensive community-based (outreach) assessment for prospective underprepared students, and multiple accessing opportunities with a wide range of financial supports and tuition-free upgrading courses.

The eleven private institutions all require BC high school matriculation or equivalent for post-secondary level study, however there is variation in the services and remedial programming available. All except Quest University offer assessment services, with an emphasis on English language competency. Six offer at least English language upgrading, and two others are partnered with other institutions for remedial English (e.g., Fraser International College to SFU). Five private institutions provide math and/or science upgrading, and two provide full Dogwood or Adult Secondary programs.

As noted above, all institutions including the research universities, institutes and private institutions provide a broad range of admission services, learning support services, and personal and career counselling for underprepared students. Many have student engagement or SEM initiatives as well. Indeed, the larger universities and institutes have well-funded and sophisticated services in most or all of these areas. Prospective learners in this grouping are often confused, frightened and vulnerable, particularly if they have been away from the educational milieu for some time. Some present with multiple life issues, apart from and exacerbating their educational need.

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[13] https://www.sfu.ca/students/admission/admission-requirements/diverse-qualifications.html

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Developmental studies (including ABE, ESL and usually ASE) form part of the current government mandate, and these are reinforced with the institutions in their own mandate letters from the Minister of Advanced Education, Skills and Training (AEST) (AEST, 2018a). The colleges, teaching universities and two of the three institutes deliver developmental education and report this activity as a performance measure in annual Accountability Reports (AEST, 2017a). We have noted the presence of support services and practices that accommodate the underprepared learner. However, these practices are not aimed at entry of "underprepared" learners specifically as an underrepresented group. This is another example of the reality of service provision absent the group nomenclature, and indeed only one institution in our survey identified underprepared learners specifically as an underrepresented group.

Family:
Family Structure, Dependent Responsibilities; Former Youth in Care

This underrepresented group is prominent in the literature, but amorphous and ungroup-like in the sociological sense. The defining barriers crosscut socio-economic categories, race, ethnicity, gender, and indeed most other characteristics so far discussed.

There is virtually no recognition of this grouping in policy. None of the institutions, public or private, had general or admissions policies regarding students with family responsibilities. Rather it is at the service level that we see evidence of support to meet the needs of this grouping.

As noted in our literature review, two of the greatest barriers to those with family responsibilities, are child care and monetary support. Not having child care is a significant barrier to post-secondary participation for parents. We found that nineteen of the public institutions had childcare centres, some on more than one campus, and two also had contracted services with community providers. We note many institutions have referral links to external providers as well. Childcare services were not apparent in any of the private institutions.

In terms of funding, at least three streams are available from government sources: the BC Childcare Subsidy (and Special Needs Supplement), the Canada Student Grant for Students with Dependents, and Part Time Students with Dependents. A wide range of scholarships and bursaries are available through most public institutions for parents and/or single parents. Indigenous students who are parents may access special support via band funding. It was not evident that private institutions offered such support, although students could access the main government sources if they meet criteria.

Former Youth in Care, as we noted in the literature review, are a special category of individual for whom, following VIU's and NVIT's early lead, government has recently provided targeted access funding. The Youth Educational Assistance Fund for Former Youth in Care, is available through all public institutions. Several institutions also provide additional funding for this especially vulnerable and underrepresented population, through scholarships and bursaries; some of which (such as VIU's) are of significant value. Promoting the educational access and the tuition waiver for Former Youth in Care, are key commitments in public institution provincial mandate letters in 2017.

Indigenous Peoples:
Including First Nations (Status and Non-Status), Metis, and Inuit

Governments at both federal and provincial levels have policy streams with regard to their statutory responsibilities, and also now in terms of reconciliation with Indigenous peoples. The federal government has overall jurisdiction while education is the responsibility of the provinces.

The government of BC has a policy history with a framework for improving access and supports for Indigenous learners in the post-secondary context. Over the last fifteen years education and employment outcomes have improved in BC (AEST, 2012), with intentions to support further gains. The Aboriginal Post-Secondary Education and Training Plan Framework was developed to increase participation, retention and success for Aboriginal learners in post-secondary education (AEST, 2018b). There were three main strategies to this framework:

- Strengthening public post-secondary institutions in meeting the needs of Aboriginal people;
- Stabilizing partnerships between public and Aboriginal institutions;
- Providing for designation of Aboriginal-controlled institutes as public bodies

The Framework almost immediately resulted in the designation of NVIT as a public institution, and provided numerous other benefits including establishment of the Aboriginal Special Projects Fund; Aboriginal Service Plans in 11 institutions; targeted seats in strategic program areas; scholarships and financial awards to support Aboriginal learners; gathering places on 24 campuses; Aboriginal transitions research projects; and policy to increase Aboriginal representation on public post-secondary institution governance bodies (AEST, 2012, p. 5)

In 2012, the 2020 Vision for the Future document was issued (AEST, 2012), continuing previous commitments and establishing five goals for the future that have direct relevance to this review of access and equity:

- A PSE system that is more responsive, relevant and respectful of Aboriginal learners;
- Community-based programs delivered through partnerships between post-secondary institutions and Aboriginal institutions and communities;
- Reducing financial barriers to Aboriginal learners;
- Seamless transitions from K-12 to post-secondary education for Aboriginal learners
- Continuous improvement based on data, research and leading practices.

A major outcome of the 2020 Vision was the creation of the Community-based Training Partnerships Program, which provides funding as the name suggests, for employment-related training partnerships in-situ with Indigenous communities. It provides the resources necessary to the public institutions to implement these.

> In 2015, the federally mandated Truth and Reconciliation Commission of Canada (TRC) published their Calls to Action (TRC, 2015). These include 94 such Calls in a variety of areas, including adoption of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). A number of the Calls to Action involve education in general and post-secondary education in particular.

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Starting in 2017 all institutional mandate letters reflected the TRC's Calls to Action, although many institutions had initiated related activities of their own volition prior to this point.

> *"1. Actively participate in an engagement process with the Ministry and Indigenous partners to develop a comprehensive post-secondary strategy that responds to the TRC Calls to Action and UNDRIP."* (AEST, 2017a)

Concomitant with this change in the Mandate Letters is that public institutions will henceforth be reporting on TRC Calls-related activities as part of their annual Accountability Reports.

Sixteen of the twenty-five public institutions had formal policies, either general or admissions-related, with regards to Indigenous people (4 Universities, 2 Institutes and 9 colleges). Perhaps not surprisingly given the above context, no private institution had a policy of any type on Indigenous learners, and only two made any statements at all in regard to this group.

Of the public institutions' policies, the General policies tended to be inclusionary in nature and to acknowledge regional or territorial relationships. Admission policies tended to enable special admissions practices or considerations for Indigenous applicants. Many speak to increasing access or participation of Indigenous peoples, although none use the term "underrepresented".

Once we focus below the policy level, a variety of services, practices, facilities, programs, and other initiatives at virtually every public institution provide innovative accommodations and partnerships to facilitate Indigenous access and success:

- Most institutions have Indigenous Board members, and most have Indigenous advisory committees to provide input and guide development of services and programs for Indigenous learners. NVIT's appointed members are 100% Indigenous.

- Most have partnerships that provide outreach services or programs in-situ on First Nation territories. These may provide career counselling, advising and admissions guidance, or dual enrolment upgrading programming to assist in cultural or educational preparation for post-secondary entrance.

- More than half of the institutions provide special access for Indigenous applicants, including priority seat allocations, review committees, modified admission requirements, or special pathway plans.

- All public institutions have an office or center (often on each campus and staffed by Indigenous professionals) that provides a range of services to Indigenous applicants and students. Often, these are substantial operations that serve both as welcome centres and service providers.

- Access services include transition or transfer assistance; assistance with applications, funding and career planning; liaison with First Nation administration, sponsor agencies and community resources; program advising, course planning and registration; campus tours and orientations to campus life. Learning supports might include tutoring, learning skills, study assistance and other learning supports; career or educational counselling; peer activities and cultural supports.

- All public institutions have web pages dedicated to available services, supports and funding, accessible to Indigenous applicants and students.

- More than half have an Elder support program that offers Indigenous students personal and student/life counselling in a culturally grounded context. Some have Indigenous Student Success or Engagement initiatives.

- Most or all of the public institutions have an Aboriginal Gathering Place, often one on each campus. These may house some of the above-noted services, or simply provide a space for study, relaxation, social interaction or cultural events.

All public institutions provide courses and programs geared in various ways to Indigenous needs and perspectives, including accessing courses, programs, and pathways containing culturally modified content and supports geared to easing transitions to post-secondary. These may be delivered as partnerships with First Nations providers, or with the participation or leadership of Indigenous educators. Indigenized content and outcomes in existing courses and programs with culturally contextualized pedagogy has been implemented at many institutions. Courses and programs about Indigenous peoples, history, cultures and issues are central to indigenous Studies programs, and there are programs specifically designed for Indigenous community development, such as First Nations Public Administration, Aboriginal Family Care, Metis Community Care Worker, Aboriginal Teacher Education, or Indigenous Legal Studies.

Although many Indigenous learners and potential learners face greater than average financial barriers to education, there are also a wide variety of supports in place that strive to meet these needs:

- First Nations Bands and Inuit communities sponsor students through two federal programs: The Post-Secondary Student Support Program (PSSSP), and the University College Entrance Preparation Program (UCEPP). PSSSP and UCEPP cover tuition, books, travel, and a living allowance, and are funded and overseen by Indigenous and Northern Affairs Canada.

- Some organizations provide scholarships and bursaries specifically for Indigenous learners, such as the Irving K Barber Foundation. All institutions provide links to and assistance with such awards.

- All public institutions have dedicated internal awards for Indigenous learners. Many apply to those with particular characteristics (such as Indigenous single parents) or program areas (such as trades education).

As an underrepresented group, Indigenous students are mostly visible, well defined, and supported through law, policy, programs and practices. In NVIT, BC has a public post-secondary institution with a defined mandate to meet

the needs of Indigenous learners. As noted above, sixteen institutions had a policy relating to Indigenous people, and all respondents to the survey reported collecting identifying data. Eight institutions identified Indigenous students as an underrepresented group, and conducted studies, planning, targeted funding, and other services and supports. All public institutions attempt to provide access and services to the Indigenous population.

Location:
Those from rural locations, or living some distance from post-secondary institutions

The literature indicated that those from rural origins are underrepresented in post-secondary education across Canada, and that underrepresentation is more marked in universities than in colleges. While this latter observation is likely due to the colleges' regional and multi-campus nature (i.e., proximity), other correlates include family factors, motivation and choice.

Post-secondary institutions do not overtly recognize those from rural origins as underrepresented. No institution identified this group as such, and no institutions have policies that address rural or distance participation (although they may have general DE policies). However, they do often have in place strategies serving those coming from, or learning at, a distance. These strategies include multi-campus locations, outreach activities of various types, distance education offerings, and residences.

All of the public institutions, and some of the private ones, have more than one campus location, and a large number have multiple delivery sites. However, some of these are smaller, community-based operations that may not offer a full array of services. Indeed JIBC, with its highly dispersed operation, delivers through some fifty sites spread throughout BC, including six campuses across the lower mainland, Victoria and the Okanagan. NVIT delivers in 25 rural and remote locations, while the eleven colleges together operate in sixty locations. Yukon College is a territorial institution with thirteen campuses.

Multi-campus operations bring educational opportunities closer to the learner along with related services such as admissions and registration, assessment, advising, counselling, and learning support services. The depth and breadth of services will depend on the size and location of the campus. The important note here is that these services and practices are not tailored to the rural learner as such, but are adaptations of centralized services, tailored to the delivery context.

All public institutions have learning or project activities that reach out to the communities they serve, beyond the campus or smaller learning center from which they might be based. Most public institutions provide community-based learning activities for First Nations, often through the Community-based Training Partnerships Program. NWCC and NVIT provide mobile training units for trades education that circulate to remote locations. As well, many institutions provide for student projects that reach out into the community in various ways, and these are an important part of Quest University's curriculum, to name but one.

All of the public and three of the private institutions offer on-line education and related services that provide opportunities for the distance or remote learner (as well as those with other types of access barriers). Two of the BC Transfer System institutions – Athabasca University and OLA – are purpose-built distance providers that have evolved into full-fledged on-line institutions. Both provide a broad range of programming and full array of services on-line. For other rural institutions, which may have vast catchment regions, on-line delivery is a desired strategy, although one that is

often frustrated in the most remote locations by connectivity issues. Selkirk, COTR, NWCC, CNC, NLC, NIC and UNBC all have proportionally large on-line, video or television offerings. Most institutions provide on-line (or remote) admissions and registration; major providers may also deliver various other services on-line (or remotely), including recruitment, advising, career and other counselling, some ability accommodations, tutoring and other learning supports, and learning assessment.

We also noted above that institutions cater to the needs of rural learners through residences. Although not all residences are built to accommodate rural learners, they very effectively fulfill this need, particularly in the more remote areas of the province. The catchment areas of CNC, NLC and NWCC are geographically large, and residences allow those from remote areas to study at a campus without leaving their region. For those who do choose to leave, residences at universities such as UBC or UVic provide a secure and affordable way to transition to campus and urban life. Seventy percent of UVic's student population comes from out-of-region, and UVic guarantees a residence space to all first-year students who desire one.

Gender:
Men or women, gender-based role barriers, or LGBTQ persons

Gender-based role barriers

We will start here with gender-based role barriers, as the general issues of men or women's participation in post-secondary education are quite different than those specifically facing LGBTQ persons.

As noted above, we cannot realistically define a globally underrepresented group along gender lines. Women and men constitute complex populations, and there are numerous gender-based subpopulations and barriers to participation. Representativeness and equity of participation remains meaningful and actionable within a programmatic context.

A great many institutions have equity or anti-discrimination policies that include reference to gender. Beyond these we could detect no policies that fostered participation of either gender in particular disciplines (e.g., women in STEM disciplines or men in Health). However, there are initiatives to support access of women to trades or STEM disciplines. No special admissions policies or practices were evident, and while advising or career counselling content would differentiate a pathway of interest to the individual seeking these outcomes, there was no particular admissions or registration practice that specifically identified gender.

Gender differentiation is experienced at the program level, and to some extent in certain types of services and supports (such as campus life type services). Programs and services tend to be targeted to women, although men over all are underrepresented on most post-secondary campuses, especially at universities. Most institutions had a Women's Center, or similar services organized in some fashion, such as an association or club sponsored by the institution or its student society. However only a very few had any such organization for men, invariably self-organized by students.

Of the twenty-five public institutions, sixteen had programs targeted to women, such as Women in Trades, Women in Engineering, or Women's Studies, while programs designed for men are extremely rate. In terms of funding, all public institutions offered bursaries and scholarships exclusively for women, with only a few tailored exclusively for men.

LGBTQ

In the public institutions, policies and practices specifically responding to the LGBTQ population are nearly absent, beyond the general equity or anti-discrimination type policies. Despite important recent efforts (Scott & Dennis, 2017), the LGBTQ population remains anonymous to most institutions, and efforts to hear voice and understand needs have been relatively ad hoc and reactive. We found that most public institutions had student society clubs or organizations to facilitate connection of like-oriented individuals. However, we noted no formal organizational efforts to support access or equity considerations.

The private institutions are either silent or negative on the admission and participation of LGBTQ people. The two faith-based institutions implicitly deter LGBTQ identifiers, and Trinity Western University has a code that excludes sexual relations outside traditional marriage, which is held by many to block LGBTQ access. The other private institutions say nothing about the issue in policy, and do not appear to have student-based organizations for LGBTQ students.

In summary, gender and LGBTQ comprise the most ungroup-like of underrepresented groups; the former because of its ubiquity and the latter because of its invisibility. All institutions collect data on binary gender, studying magnitudes and trends, attributes, preferences and outcomes. We learned in our surveys that five public institutions also collect non-binary gender information, and three others collect it in general surveys. Only one institution identified men (aged 15-35) as an underrepresented group, and one identified women. No survey respondents identified LGBTQ persons as an underrepresented group.

Ability Limitation:

Those with a disability, physical or cognitive conditions that can limit participation

Our literature review revealed that persons with a disability or activity limiting condition constitute an underrepresented group generally, and that the degree of underrepresentation is particularly acute for those with cognitive challenges. The group is composed of those with a broad range of conditions and temporal factors, ranging from minor to significant, and from temporary to permanent cognitive or physical limitations.

Applicants with a Persons with Disabilities (PWD) status have the right to services provided by government under the Employment and Assistance for Persons with Disabilities Act [SBC 2002] Ch. 41. These individuals form a tightly defined and recognized group and post-secondary institutions have a "duty to accommodate" under the Canadian Human Rights Act, and the BC Human Rights Code "to the point of undue hardship". Never-the-less, access and equity to post-secondary education remains a challenge.

Applicants or students within this underrepresented group may lack official status yet need and deserve accommodation. These individuals may have a "Transitory Disability", so-named because their condition is non-permanent. In terms of policy and practices the distinction is important, because the institution may provide accommodation and strive to assist those with say, an injury, or health, or mental health issue; but they are obliged to accommodate, those with government-recognized PWD status.

> Twenty-four of the institutions scanned had a formal policy statement related to students with disabilities. Usually these recognized the duty to accommodate, and most stated that post-secondary level entry requirements, or learning outcomes, would not be modified as part of the accommodation.

Twenty-four of the institutions scanned had a formal policy statement related to students with disabilities. Usually these recognized the duty to accommodate, and most stated that post-secondary level entry requirements, or learning outcomes, would not be modified as part of the accommodation. Only two of the private institutions posted a formal policy.

Most of the institutions stated they would provide accommodations during the entry process if needed: three stated they would consider altering entry requirements. Usually reported were accommodations for entrance exams or other assessments, or provision of audio supports, or web or print materials suitable for the visually impaired.

Here it is important to note that while the institution may provide a broad range of supports to students, usually the applicant or prospective student is coming to the institution with at least some of the supports and technologies necessary to accommodate their personal needs. What the institution will typically supply or facilitate are the accommodations necessary to adapt specifically to institutional processes and learning requirements.

All public institutions have a "Disability" or "Accessibility" Services department whose functions are to provide, facilitate or organize the institutional/educational supports required by the student. The student (or applicant) will identify to this department, present their documentation, and be assessed for the necessary accommodation. This department will either provide the accommodation directly or draw upon the services of system-wide, or other external providers. Such important accommodations and supports are necessary to provide access for this grouping of potential post-secondary students. However, some issues remain – for instance the availability of assessment services, and needed accommodations may be problematic in remote rural areas.

Departments may provide some or all of the following: a computer, laptop or tablet with specialized software; recording equipment or a portable note-taking device; a device for playing audio books or e-books; textbooks in e-format; magnifiers; closed-circuit devices; large print reading materials; Braille reading materials or a manual Brailler; a teacher's aide or tutor; a sign language interpreter; attendant care services; a speech therapist; a modified or adapted course curriculum; an individualized education plan; extended time to take tests and exams; a note-taking assistant; preferential in-class seating; audio or video recordings of lectures; wheelchair-accessible desk; mental health resources; specialized academic counseling; or on-campus transportation among possible others.

Both Thompson Rivers University and Athabasca noted providing visual, hearing, and other accommodations for those studying on-line, and indeed all institutions have computing stations with adaptations for those with visual, and/or hearing, limitations. System-wide external providers, funded by government, include the Program for Institutional Loan of Assistive Technology, through Assistive Technology BC. Eligible students may purchase or borrow needed technologies, and they may receive training and technical support. The Centre for Accessible Post-Secondary Education Resources, which functions through Langara College, provides course materials in alternate formats (MP3, Large Print, Braille, etc.).

Post-Secondary Communication Access Services functions from BCIT provides services for deaf, hard of hearing, and deaf-blind students by assisting disability coordinators to hire service providers, such as interpreters, transcribers, cap-tioners, and electronic note-takers. Such agencies seek to ensure post-secondary access.

As well as providing access assistance and accommodations within post-secondary level programming, many institutions offer Adult Special Education (ASE) programs. ASE programs are intended for students with permanent disabilities or a combination of learning difficulties that would considerably hinder scholastic success. Nine of the colleges and five teach-ing universities offer such programs. Of course, students in these programs are also supported by centrally provided institutional services.

Students with disabilities in BC are supported through funding and are eligible for a total of twenty-five loans, grants and bursaries through StudentAid BC. Many of these are only available to those with a specific disability (e.g., the BC Access Grant for Deaf Students). However, there are some funding issues that remain, including a two-year assessment window for those transitioning from K-12, forcing some to self-fund.

As an underrepresented group, students with disabilities may be considered quite visible and well supported in law, policy, programs and practices. Twenty-four institutions had a policy relating to those with a disability, and ten of fifteen collect and report participation. All who served these students collected data through their Accessibility Services or equivalent department, which is reported annually to the provincial government. Seven institutional respondents identi-fied students with disabilities as an underrepresented group, and discussed studies, data, targeted funding and services. One respondent noted faculty development initiatives to support ability-limited students. Seven public institutions made reference to students with disabilities in their Accountability Reports.

Cultural Distinctiveness:
Recent immigration, minority ethnicity or English language barriers

As noted above, these descriptors comprise three aspects of what for the purposes of this paper we will consider a single underrepresented group. However, we also noted from the literature that the degree of underrepresentation of this group is very contextual: low participation is more predominant in colleges than universities; and more so among certain ethnic identities than others.

Citizenship and immigration is ultimately governed by the *Immigration and Refugee Protection Act* [SC 2001, C.27] of Canada, and all BC Transfer Institutions have admissions policies that reflect its statutory requirements. The onus is on the applicant, if necessary through their sponsor or legal advisor, to present the proper documentation, and any appeal must be pursued through Immigration, Refugees and Citizenship Canada. If immigration status presents a barrier to post-secondary education, it only does so statutorily for a very small contingent of Non-Convention Refugees. However, in other cases recent immigrants may face other, non-statutory barriers to post-secondary education; for instance, because they may not have sufficient monetary resources, or other supports (child care, transportation, etc.), to attend.

All applicants must provide proof of their citizenship and/or immigration status, and this then becomes a point of triage and a possible barrier. For instance, a Canadian citizen, regardless of where they were born, will pay domestic student tuition and be eligible for government-based financial aid. The same is true for a recent immigrant who is now a Permanent Resi-dent; and for certain classes of government-documented Refugees. Citizens of another country, normally in Canada under a Study Permit, would usually pay international education level tuition.

In terms of ethnicity, institutions generally have anti-discrimination (or inclusion) policies; and where they do not, institutions are governed by the Canadian Human Rights Act and the BC Human Rights Code. Thus, institutions may not withhold service based on ethnicity: inequities in ethnic participation noted in the literature may be an artifact of immigration patterns or cultural reticence rather than policy or action of governments or institutions. For decades it was interdicted to even ask for information on ethnicity on applications or surveys, and it is only more recently that collecting these data have become more acceptable. In our survey only two of fifteen responding institutions asked for such information on their applications, while five others did so on student surveys.

Applicants presenting with language barriers do pose an issue, although institutions are commonly well equipped to respond. Where English 12 or equivalent is a necessary prerequisite to virtually all post-secondary level study, lacking this requirement is a barrier. When the requirement is not documented or otherwise evident, the applicant is normally sent for assessment; and depending on results s/he may be streamed either into ABE or ESL programming. Once the learner is assessed, s/he is placed in a course/level where s/he is able to resume learning. All of the colleges and most teaching universities have English as a Second Language programming (ELD, ELL, EAP) at various levels; some are self-paced and/or tailorable to individual needs.

The specific practices for admission and registration of applicants without adequate English skills are those discussed above in relation to the underprepared learner. If the language barrier is significant, the individual may also be assisted with interpretive services.

The more "high touch" processes are facilitated by the ESL department, and the department will usually assist the learner in orienting to the institution, navigating funding and fee payment, obtaining transit passes, and purchasing books and supplies. For example, Camosun, has personnel familiar with a number of languages who can assist in welcoming the individual.

Most courses and programs are academically oriented: that is, they are geared to taking the learner to a level of subsequent academic study. However, conversation classes, and courses such as English for Work, are also offered, often through continuing education operations. Seven of the Private institutions offer ESL programming, and the Research Universities offer it as well through their continuing studies arms. AEST (2017b) maintains a website of providers and an Articulation Guide[14].

Students studying ESL are not normally eligible for student loans through StudentAid BC, however as with ABE programs, they are eligible for the Adult Upgrading Grant. Most colleges and a few other institutions have scholarships or bursaries available to these learners as well.

Taken as a whole, the group comprised of recent immigrants, ethnic minorities, and minority language speakers, are among the least underrepresented of our groups. Every institution has large numbers of students who are immigrants to Canada and successfully participating in post-secondary education in BC. The group is the least recognized as underrepresented in our surveys, and one of the least in terms of institutional policy. While institutions have practices to triage and assess these prospective students, and to overcome barriers of language and financing, none have policies specifically aimed at actively increasing participation.

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[14] https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/adult-education/esl_articulation_guide_2016-2017.pdf

Conclusion

We began our study with an exploration of the literature, which both affirmed the existence of our nine underrepresented groups, and which provided a fairly detailed sense of the nature and magnitude of the issues facing each. We observed that while all of the groups faced barriers, and some a multiplicity of them, not all barriers defined groups, at least in the sociological sense.

Indeed, this is a key point on which our study has turned, reflecting the way in which institutions both perceive and serve those who are underrepresented. We saw that some groups are truly such: well-defined, self-aware, cohesive, visible, having voice, and advocating for and receiving needed services from institutions. Institutions are in turn aware of these groups as groups, often via government mandates and legal frameworks, and respond on an entity-to-entity basis. Prime examples noted here are Indigenous peoples, and those with an ability limitation designation. Although of course these present as individuals, they receive the services they do precisely because of their group membership.

On the other end of the continuum are categories of individuals who may share a common set of characteristics, but who lack most of the other elements that define groups, such as mutual-awareness, cohesion and common voice. This is not to deny that barriers exist for these individuals, or their cogence, or their unequal representation in post-secondary education; but merely to acknowledge that they face these barriers as individuals rather than group members. Examples we saw here include single parent students, those from rural origins, or first-generation learners.

Cross-cutting this group-individual continuum is the dimension of institutional awareness. We saw that few institutions used language such as 'underrepresented' or 'underserved' in targeting services to groups, or to individuals. Only seven institutions reported using these terms, or reported designating underrepresented groups; and here again Indigenous peoples and those with an ability limitation were by far the most common. As well, although a number of institutions collected data pertaining to various characteristics of identified groups, few did so in a way that would facilitate the targeting of services and supports to group members. Here again the exceptions are Indigenous peoples and those with an ability limitation, to which we add those facing financial barriers.

However, although institutions might not recognize a group as such, or designate it as 'underrepresented', they in a great many cases still had policies and practices that supported such students, and that facilitated their access and continued participation. In many cases these were very direct and explicit: providing scholarships or student loans to break down financial barriers; providing assessment and pathways for the underprepared learner; or providing welcome services and language instruction for recent immigrants.

Only a few of the selected underrepresented groups seemed invisible to institutions for all practical purposes, and here again we see individuals sharing a common characteristic rather than a strong group identity: LGBT persons, those who are married or with dependents, and first-generation learners. As noted above this latter case is interesting, as they are highly present in the research literature and SEM theory, and yet almost completely absent from institutional policy and practice.

A final note in this context is that services, practices and programs have, in many cases, outstripped the more laggard development of policy frameworks. We noted above that policy development is uneven across the institutions. What matters most is that practices are responsive and assistive to learners and prospective learners, and perhaps less so that they are grounded in a formal document. The huge upside here, is that even where this is the case, services,

practices, and programs have evolved to meet the practical need. Institutions are adaptive, staff want to welcome and assist, innovations become practices, and practices are refined and shared. Everywhere learners are being supported, and participation and successful outcomes facilitated, regardless of pockets of theory vacuum, or some policy short-comings.

Post-secondary education in BC has evolved greatly from its roots, and the quest for equity of opportunity has become both more focused, and at the same time more complex.

But has the quest succeeded? The evidence is that in large part it has, although notable gaps remain. Certainly, specific improvements have been seen over time, such as in women's participation, participation of those from low-income backgrounds, and in access by linguistic and ethnic minorities. However, small but significant pockets of underrepresentation remain, and an effort to understand whether, and how they are being addressed in the policy and practice context, is well founded and timely.

Deloitte (2012) in their report to Colleges Ontario note that previous successes have essentially raised the bar for those that follow; and that increased efforts and increased expenditures are required to make further gains. This is certainly the case in British Columbia as well, as we strive to further break down barriers and facilitate access, to those who remain underrepresented and underserved.

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APPENDIX 1:
Institutions Reviewed or Responding by Phase of Study

	Abbreviation	Website / Document Scan	Institutional Research Survey Response	Admissions Practices Interviews
Camosun College		X	X	X
College of New Caledonia	CNC	X		
College of the Rockies	COTR	X	X	
Douglas College		X		X
Langara College		X		
North Island College	NIC	X	X	X
Northern Lights College	NLC	X		
Northwest Community College	NWCC	X	X	X
Okanagan College		X	X	
Selkirk College		X		
Vancouver Community College		X	X	X
British Columbia Institute of Technology	BCIT	X		
Justice Institute of British Columbia	JIBC	X	X	
Nicola Valley Institute of Technology	NVIT	X	X	X
Capilano University		X	X	
Emily Carr University of Art & Design		X		
Kwantlen Polytechnic University		X	X	
University of the Fraser Valley		X	X	
Vancouver Island University	VIU	X	X	
Royal Roads University		X		
Simon Fraser University	SFU	X	X	
Thompson Rivers University	TRU	X		
University of British Columbia	UBC	X	X	
University of Northern British Columbia	UNBC	X		
University of Victoria	UVic	X		X
Ascenda School of Management		X		
Alexander College		X		
Art Institute of Vancouver		X		
Columbia College		X		
Coquitlam College		X		
Corpus Christi College		X		
Fairleigh Dickinson University		X		
Fraser International College		X		
Quest University		X		
Trinity Western University		X		
University Canada West		X		
Athabasca University		X	X	
Yukon College		x		

APPENDIX 2:
Key Sources for Data on Post-Secondary Participation in Canada – Detailed Discussion

National Data and Reports

Education Indicators in Canada: Handbook for the Report of the Pan-Canadian Education Indicators Program September 2017 (Statistics Canada 2017a) lists in Section D: Postsecondary Education, all of the data collection processes involved in managing formal data releases about post-secondary education in Canada.

National data collection about post-secondary learning and achievement is currently done through two main vehicles: Census of Canada and CANSIM. Key data sets are discussed below in terms of the general nature, scope, and content of data provided, as well as some notation about availability and access. Not all the data sets cited in this report are not currently operational, but they are available through archives.

Census of Canada

Data from the 2016 Census are coming available at the time of this report, and ten-year comparisons with 2006 will soon be more readily available. On November 29, 2017, the document *Education in Canada: Key results from the 2016 Census* was released (Statistics Canada 2017b).

There are a series of releases from the Census on special topics, such as comparisons of earnings by level of education and employment of degree holders from STEM fields (showing continued gender differences in these fields). Distribution of the adult population by highest certificate, diploma or degree is available from Statistics Canada in Table 477-0095. The Census Web Module (http://www12.statcan.gc.ca/census-recensement/index-eng.cfm?HPA) guides users through the key indicators of educational achievement. Census releases from the long-form Census questionnaire also include data from the National Household Survey (NHS), which was a voluntary survey in 2011 that included data on educational attainment.

Canadian Socio-economic Information and Management System – CANSIM

The CANSIM is Statistics Canada's central socioeconomic database, containing multiple data sets on various dimensions, including education and demographics among many. There is a user-accessible data interface which provides availability to current and historic data sets in various time-series, and geographic aggregates (national, provincial etc.). There are more than 200 tables related to education alone, including topics such as: adult education and training, education finance, education indicators and educational attainment. Within CANSIM are several data sets related to post-secondary education, including the Enhanced Student Information System (ESIS), the Tuition and Living Accommodation Costs Survey (TLAC), and the Registered Apprenticeship Information System (RAIS). Regarding this latter, while Apprentices are excluded from PSIS, they are reported in a separate reporting series under an annual census called RAIS. A recently released RAIS table is Statistics Canada Table 477-0117 - registered apprentices by sex and major trade groups.

Postsecondary Student Information System (PSIS)

Statistics Canada collects post-secondary enrolment and credential data directly from post-secondary institutions (or through intermediary organizations such as provincial governments). Reported data from the Postsecondary Student Information System (PSIS) are annually released. Information pertaining to institutions, programs, courses and students are collected for registered post-secondary students at public institutions. Enrolments are based on an annual "snapshot date".

An example of a recent Statistics Canada data release is Table 477-0029, which reports on Canada's post-secondary students in terms of gender, and primary groupings of the Classification of Instructional Programs. This table allows for a review of gender underrepresentation in certain program areas. Tables from PSIS can be manipulated (e.g., selected for specific provinces and years) and downloaded.

Current releases of the PSIS data include the variables of gender, student full-time/part-time status, program type, country of citizenship, and age group. For example, the release of Table 477-0033 provides post-secondary data from 2010-2011 through to 2014-2015, including provision to add, remove, manipulate and download data to meet research needs.

National Graduates Survey – NGS

The last national release of data collected from post-secondary graduates, the National Graduates Survey (NGS), was in 2013. The release encompasses the class of 2009/2010, three years after graduation from public and private post-secondary institutions, from degree, diploma and certificate programs (excluding trades/apprenticeships). Demographic data, student loan information, aboriginal identify, parental education, language spoken at home, and dependent children, were collected from the responding graduates. The most recent report can be found at: http://www23.statcan.gc.ca/imdb-bmdi/instrument/5012_Q3_V5-eng.pdf.

General Social Survey - GSS

Although not an educational survey per se, the GSS does provide data pertinent to some of the underrepresented groups discussed below, including selected characteristics, and some data on educational context. It is cited in some of the studies reviewed below, and so referenced here.

Established in 1985, Canada's General Social Survey (GSS) program was designed as a series of independent, annual, cross-sectional surveys, each covering one topic in depth. The overall objectives of the program are to gather data on social trends in order to monitor changes in the living conditions and well-being of Canadians, and to provide information on specific social policy issues. Current GSS themes include caregiving, families, time use, social identity, volunteering and victimization. Each of the above six survey themes is repeated in depth approximately every 5 years. In addition to the core topic, space is reserved in each cycle for new content that addresses emerging policy issues. As well, each survey collects comprehensive sociodemographic information such as age, sex, education, religion, ethnicity, income, etc. Until 1998, the sample size was approximately 10,000 persons, but was subsequently increased to an ongoing target of 25,000. With this larger sample, estimates are available at the national, provincial, and some census metropolitan area levels. Depending on the survey topic, the increased sample size may also be sufficient to produce estimates for subpopulation groups such as single parent families, visible minorities and seniors.

The General Social Survey can be accessed at: https://www.statcan.gc.ca/pub/89f0115x/89f0115x2013001-eng.htm 2/15

Post-Secondary Education Participation Survey - PEPS

Although PEPS itself was a one-time survey, its content was of direct interest to those studying transitions to post-secondary education. It is cited in a number of the studies reviewed, and so is referenced here. Most or all of PEPS content was subsumed and repeated under the ASETS survey discussed below.

PEPS was a September 1982 supplement to the Statistics Canada Labour Force Survey (LFS) and identified the extent to which residents of Canada had participated in post-secondary education, as well as reasons for non-participation. The survey was concerned with the background of individuals: year last attended, degree attained, length of program, field of study etc., in order to enable description of subsequent educational achievements. Types of post-secondary training included university, college, trade vocational and apprentice programs. For persons who attended a university, college or CEGEP, further questions were included concerning their use of government student loan programs while attending.

The survey also included questions concerning any part-time courses taken during the past three years and the main reason for taking the courses. The final question of the survey probed the highest level of education achieved by both parents of the respondent.

Post-Secondary Education Participation Survey data has been archived, however it is available through Statistics Canada upon request.

Survey of Labour and Income Dynamics – SLID

The Survey of Labour and Income Dynamics in its modern form, ran from 1998 through 2011. While it is no longer active it is widely cited in studies of underrepresented groups in PSE, and so is referenced here.

The SLID was conducted as a series of six-year longitudinal panels (samples) drawn from the Labour Force Survey sample, and it includes roughly 17,000 households per panel. The SLID data is valued for this longitudinal aspect, for its robustness, and because the information overlaps the worlds of family, education, and work. Information was collected regarding labour market experiences, income, educational activity, and family relationships, as well as demographic characteristics of family and household members etc.

Tables of SLID data are available through CANSIM at http://www5.statcan.gc.ca/COR-COR/COR-COR/objList?lang=eng&srcObjType=SDDS&srcObjId=3889&tgtObjType=ARRAY and the full data set is available through Statistics Canada by request.

The Access and Support to Education and Training Survey – ASETS

The ASET survey of 2008 brought together three previous surveys that address antecedents and determinants to post-secondary education access, specifically including the role of student financing and participation in adult education and training. ASETS replaced the Survey of Approaches to Educational Planning (SAEP), the Postsecondary Education Participation Survey (PEPS), and the Adult Education and Training Survey (AETS).

ASETS expanded the analytical potential of the three separate surveys, in terms of content, sample sizes etc., and by allowing the study of correlates across all three themes, within the context of lifelong learning. The data collected by the ASETS helped researchers to explore preparedness and access to education, evaluate the effectiveness of government education-related programs and develop policies to deal with the training needs of Canadians.

The target population for ASETS was comprised of all Canadian residents aged less than 65 years old, excluding individuals residing in the three territories in the North, and excluding individuals residing in institutions. The survey covered approximately 41,000 cases.

A public use microdata file is available and can be accessed from http://www12.statcan.gc.ca/census-recensement/2011/ref/92-135/surveys-enquetes/educationsupport-educationformation-eng.cfm

The Survey of Approaches to Educational Planning (SAEP) noted above was last conducted in 2013. As the name suggests SAEP examined how individuals prepare their children for post-secondary education. The primary objective of the survey was to understand the processes by which the parents/guardians of children gather together the monetary and non-monetary resources needed to successfully pursue post-secondary education. Data include family background, school experiences, income, financial preparedness etc. SAEP data are cited in some of the studies reviewed below, and so the survey is referenced here.

SAEP data has been archived but is available from Statistics Canada upon request.

School Leavers Survey – SLS and School Leavers Follow-up Survey – SLSF

The primary objective of the School Leavers Survey (1991) and Follow-up Survey (1995) was to study the school-work transitions of young people beyond high school. The surveys followed an initial approximately10,000 individuals from the end of high school, through any post-secondary experiences, on to the first job, and subsequently through other employment, educational, or life experiences. Data were included on HS and post-secondary education, level of post-secondary attainment, employment held while in school, job search tactics, jobs obtained, characteristics of these jobs, and satisfaction with these jobs. Data was also obtained on any ability limitation, Indigenous identity, ethnicity, immigration, family structure, income, language and mobility; all of which made the surveys of major interest to those studying underrepresented groups and barriers to post-secondary education. The data is cited in numerous studies reviewed below and so is referenced here.

SLS and SLFS data have been archived but are available on request from Statistics Canada.

Youth in Transition Survey – YITS

There is no other Canadian data set that has been as important to the study of underrepresented groups, and barriers to education, then the Youth in Transition Survey, and no other data set is referenced as frequently in studies we reviewed. For these reasons YITS is referenced here, even though it ran from 1999 to 2010 and has since been discontinued.

YITS was a longitudinal survey, jointly administered by Statistics Canada, and Human Resources and Skills Development Canada. It was designed to provide policy-relevant information about school-work transitions, and factors influencing these pathways. YITS data provided a vehicle for exhaustive research and analysis of major transitions in young people's lives, particularly those between education, training and work. It also helped clarify the nature and causes of short and long-term challenges faced in school-work transitions; all of which were in turn often used to support policy, planning and decision-making. Content included measurement of major transitions in young people's lives, virtually all formal educational experiences, and most labour-market experiences. Also included were a wealth of contextual factors such as family background, finances, school experiences, achievement, aspirations and expectations, and more.

The data encompasses longitudinal survey responses for each of several binary age-cohorts (15 and 18-20 years) from across Canada, surveyed every two years over a ten-year period. Cohort A encompassed 23,000 individuals, and there are six cohorts in the database, making for a large and complex sample.

The data itself has been archived but is available upon request from Statistics Canada. A series of Statistics Canada reports from the YITS can be found at http://www5.statcan.gc.ca/COR-COR/COR-COR/objList?lang=eng&srcObjType =SDDS&srcObjId=4435&tgtObjType=OLC

Provincial Data and Reports

BC Student Outcomes

The BC Student Outcomes Research Forum represents a long-standing partnership among the Ministry of Advanced Education, Skills and Training, participating post-secondary institutions, and a number of system-wide organizations, including the Industry Training Authority, the BC Registrars' Association, and the BC Council on Admissions and Transfer. The Forum oversees BC Student Outcomes, from data collection to the reporting of survey results.

BC Stats annually collects these data on behalf of all public post-secondary institutions to explore student satisfaction, transfer, and employment outcomes. There are three main surveys and baccalaureate graduates (BGS), certificate and diploma graduates (DACSO) and former apprentice students (APPSO) are asked slightly different, relevant questions.[15] Half of all former students respond to surveys, with results used to inform government and institutions about many aspects of student success. Data are managed by BC Stats: http://outcomes.bcstats.gov.bc.ca/Default/Home.aspx.

The surveys collect demographic data and have a section of "equity questions". Variables regularly included in these graduate surveys include gender and age, as well as Aboriginal identity, long-term physical or mental health condition, country of origin, and immigration status. Information about how students financed their post-secondary education is also collected, and occasionally the subject of a special report. Immigration status and Aboriginal identity are regularly reported as key variables in papers, info-graphics and reports.

Reporting from the two largest surveys (BGS and DACSO) is available in pdf format (BGS) or through a dashboard (DACSO) for each program at each institution. The pdf reports from the BGS allow researchers to view key variables of gender, disabled, age, Aboriginal identity and education funding sources. For example, 37% of the graduates from Biology incurred student loan debt, 4 percent reported a disability, 3% were international students and 2% reported Aboriginal identity.

Other than gender, data on specific groups is less available in the interactive (dashboard) format of the DACSO reports. However, special studies from this survey often include data on the variables central to this report. For example, the information paper *"Meeting the Challenge: How Diploma, Associate Degree, and Certificate Students Paid for Their Studies"* (BC Student Outcomes, 2016), includes results by gender, age, and sources of funding. This report documents that women are more likely to adjust their studies for financial reasons (to part time, or by interrupting studies) than are men.

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[15]-A fourth survey, the Developmental Student Outcomes Survey (DEVSO) was conducted from 2009 to 2014 to collect student outcomes data from former upper level Adult Basic Education and English as a Second Language students. The final report from this series (2014) includes findings about gender, age (28% aged 30 or over), family structure (almost 20% with children), having a high school diploma, region of residence, source of funds, and immigration status.

Student Transitions Project (STP)

The Student Transitions Project[16] links data about students in the BC public post-secondary education system, with information from their years in kindergarten to Grade 12. The data comes from nine-digit personal education numbers, or PENs, which are assigned to every student entering the BC education system. Data are coordinated by the BC Council on Admissions & Transfer and governed by a representative steering committee of participating universities, colleges, institutes and government ministries. Regular reports and special studies provide a wealth of knowledge about the transitions of BC students into post-secondary education and mobility between institutions.

The STP collects data from the K-12 system as well as the public post-secondary system. Variables of interest to the study of underrepresented groups includes gender, age, Aboriginal identity, high school non-completion, region, delayed entry, 'special needs', and primary language spoken at home.

Regular releases from the STP include a set of recurring reports about transitions and mobility as well as special topic reports that sometimes include aspects of underrepresented students. In this regard, there are special topic reports on non-graduates from high school, and international students, A recent special topic report on bachelor's degree completers provides a demographic profile (59% female, 3% Aboriginal students, 13% international students, and only 12% older than 30 years (Heslop, 2015).

Central Data Warehouse (CDW)

The Post-Secondary Central Data Warehouse contains standardized data relating to student demographics, programs, credentials, courses, session registration and campuses for 21 public post-secondary institutions in B.C., including colleges, institutes and teaching-intensive universities (but not including research universities). The data are updated in May and October of each year, managed and released through the BC Ministry of Advanced Education, Skills and Training.[17]

Regular releases of standard reports show enrolments by program area, gender, Aboriginal identity, age category, credentials awarded, and international students.

The CDW provides a useful interactive reporting tool with the ability to examine enrolments or credentials earned in terms of gender, age, international and Aboriginal identity by institution and institution type: http://www.aved.gov. bc.ca/interactive_reporting/welcome.htm

The research universities in BC regularly populate a publicly available Excel spreadsheet at http://www.bcheadset.ca that contains similar data to that provided through the CDW. Gender, international students, high school location and Aboriginal identity are provided through pivot tables.

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[16] https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education/data-research/student-transitions-project

[17] Post-Secondary Central Data Warehouse. Accessed Dec 11, 2017 from https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education/data-research/post-secondary-central-data-warehouse