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Students in private postsecondary education, 2020: A feasibility study

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by Eric Fecteau and Melissa Van Bussel

Using data collected for the <u>Postsecondary Student Information System</u> (PSIS), Statistics Canada has long published the enrolment and graduation indicators for Canadian public postsecondary institutions. PSIS is a national survey that collects administrative data exclusively from public postsecondary institutions. Therefore, data on private postsecondary institutions, and students attending these institutions, have yet to be explored at the same depth and breadth by Statistics Canada, especially at the pan-Canadian scale.¹ This document, and the accompanying infographic entitled "Students in private postsecondary education, 2020: Results of a feasibility study" attempt to address this data gap through the <u>Education and Labour Market Longitudinal Platform</u> (ELMLP) with results from the study of a new source of data.

Data source and institution types

The study uses anonymized data, primarily from the T2202 Tuition and Enrolment Certificate file. The T2202 is a tax form provided by Designated Educational Institutions² to all qualifying students in a qualifying educational program attending postsecondary education at a designated educational institution.³ Designated Educational Institutions include both public and private institutions. The Canada Revenue Agency has collected the T2202 Tuition and Enrolment Certificate since 2019. This analysis focuses on the students enrolled in postsecondary institutions in the 2020 calendar year. The T2202 file does not contain a variable identifying whether an institution was public or private. Therefore, to understand the characteristics of students who attended private postsecondary institutions, it was necessary to first determine the population of students who attended public postsecondary institutions.

The Postsecondary Student Information System (PSIS)⁴ maintains a list of all public postsecondary institutions in Canada.⁵ To determine the population of students in the T2202 data attending public postsecondary institutions, the institutions on the T2202 Tuition and Enrolment Certificate that were part of the list of public postsecondary institutions maintained by PSIS were classified as "public institutions" for this study.⁶

By definition, all other institutions found on the T2202 Tuition and Enrolment Certificate were therefore classified as "private" institutions for this study. This includes all other designated educational institutions that offer a tax credit-qualifying educational program, which is a program that lasts at least three consecutive weeks and requires a minimum of 10 hours of instruction or work in the program each week (not including study time).⁷

^{1.} Some exploration of students attending these private institutions has been conducted by using the Survey of Labour and Income Dynamics in 2006: <u>Canada's Private Colleges: The Lesser</u> Known Players in Postsecondary Education (statcan.gc.ca).

^{2.} Designated Educational Institutions are 'designated' for the purpose of determining a student's eligibility for tax credits. They include "Canadian universities, colleges, and certain other educational institutions" and "Canadian educational institutions certified by Employment and Social Development Canada (ESDC) providing courses that develop or improve skills in an occupation, other than courses designed for university credit". For this analysis, the very small number of "universities, colleges, or other educational institutions" in the United States that give courses at the post-secondary school level, if the qualifying student is living in Canada (near the border) throughout the year and commutes to that institution", were removed from the analysis.

^{3.} For more information on the qualifying students and qualifying programs, see the "Guide for Designated Educational Institutions - Filing the T2202, Tuition and Enrolment Certificate and Summary".

^{4.} PSIS is a national annual administrative database that enables Statistics Canada to provide detailed information on enrolments and graduates of Canadian public postsecondary educational institutions to meet policy and planning needs in the field of postsecondary education. PSIS collects information pertaining to the programs and courses offered at an institution, as well as information regarding the students themselves and the program(s) and course(s) in which they were registered, or from which they have graduated.

^{5.} Public institutions for PSIS are defined as "public universities and colleges that are partially or totally funded by a ministry of education (including private not for profit institutions)". Some provincially and federally funded institutions may not be considered "public" by this definition if they are not funded by a ministry of education.

^{6.} The <u>Business Register</u> was used in conjunction with the list of public postsecondary institutions maintained by PSIS to correctly identify public postsecondary institutions on the T2202 Tuition and Enrolment Certificate. The Business Register is Statistics Canada's continuously-maintained central repository of baseline information on businesses and institutions operating in Canada. As a statistical register, it provides listings of units and related attributes required for survey sampling frames, data integration, stratification and business demographic statistics.

^{7.} The 10 hours spent on instruction or work includes lectures, practical training, and laboratory work. It also includes research time spent on a graduate or postgraduate thesis. An individual undertaking a post doctoral fellowship is not considered to be enrolled in a qualifying educational program for tax purposes.

Population of study

Of the 3.6 million student records on the T2202 Tuition and Enrolment Certificate file for 2020, 94.5% of records had sufficiently detailed information to be integrated into the analysis. The remaining records, requiring more information, were removed from the analysis.

Among those with sufficient information to be included in the analysis, 8.7% had more than one record. Some of these multiple records were due to duplicated information, and some were due to students attending multiple institutions in the same calendar year. When a student had multiple records, one was selected randomly to not favour private or public institutions. The resulting population for analysis was 3.1 million students.

Some institutions had campuses in more than one province. To avoid over-representation of any institution in the regional analysis, assigning only one province for each institution was necessary. The campus of study was not available at the individual level on the T2202 Tuition and Enrolment Certificate data. Therefore, the province with the highest number of T2202 slips filed was selected as the "province of institution". However, if an institution had more than 50% of its students with a mailing address in a different province than the determined "province of institution" for the institution,⁸ the institution was removed from the regional analysis portion of the infographic. These excluded institutions are assumed to have offered primarily online postsecondary education, with students enrolled from a wide range of geographical locations.⁹ They accounted for 7% of all institutions in the T2202 Tuition and Enrolment Certificate data, representing 3.8% of all students in the study population (20.8% of students attending private institutions and 1.7% of those attending public institutions).

Since the T2202 Tuition and Enrolment Certificate did not contain information on gender¹⁰ and age, the student data was integrated with variables from the 2021 Census to perform the gender and age analysis. Overall, 82.7% of students could be integrated with the 2021 Census data (82.1% from private institutions; 82.8% from public institutions). The remaining gap was likely due, in part, to international students who did not remain in Canada during the Census collection in 2021. Those who could not be integrated with the 2021 Census data were removed from the gender and age analysis portion of the infographic.

Comparison of results with other data sources

Comparing the T2202 with PSIS

It is possible to use additional sources of information to verify the accuracy of the information published on public and private schools using the data from the T2202 Tuition and Enrolment Certificate. Using the definition of "public postsecondary institution" described previously, the T2202 determined that 2,768,770 unique students were attending a public postsecondary institution (89.0%) and 340,820 unique students were attending a private postsecondary institution (11.0%) in the 2020 calendar year. By comparison, in PSIS,¹¹ 2,812,750 unique students attended a public postsecondary institution in the 2019/20 academic year and 2,748,470 unique students attended a public postsecondary institution in the 2020/21 academic year.

Using the integration between the T2202 and PSIS, 83.3% of students in the T2202 Tuition and Enrolment Certificate file for calendar year 2020 were found in either the PSIS 2019/20 dataset or the PSIS 2020/21 dataset, with 67.6% found in the PSIS 2019/20 dataset, and 73.0% in the PSIS 2020/21 dataset. Since PSIS is based on an academic year, the PSIS 2019/20 and PSIS 2020/21 datasets are necessary to derive the 2020 calendar year. The percentage of students on the T2202 found in either the PSIS 2019/20 dataset or PSIS 2020/21 dataset (83.3%) was 5.7 percentage points lower than those determined as attending a public postsecondary institution on the T2202 (89.0%). This comparison between PSIS and the T2202 will favour public institutions over private institutions for students who were attending postsecondary in both institution types in the same calendar year.

^{8.} The province of the mailing address where the student received their T2202 slip is normally available on the T2202, but some institutions did not provide this information. These institutions were not removed from the regional analysis portion of the infographic.

^{9.} The COVID-19 pandemic may have impacted the mode of course delivery of some institutions and the location of where students received their T2202 slips at the beginning of 2021.

^{10.} Given that the non-binary population is small, data aggregation to a two-category gender variable is sometimes necessary to protect the confidentiality of responses provided. In these cases, individuals in the category "non-binary persons" are distributed into the other two gender categories and are denoted by the "+" symbol. The category "Men+" includes men (and/or boys), as well as some non-binary persons. The category "Women+" includes women (and/or girls), as well as some non-binary persons. For more details on the new gender concept, see <u>Age, Sex at Birth and Gender Reference Guide, Census of Population, 2021</u>. A fact sheet on gender concepts, <u>Filling the gaps: Information on gender in the 2021 Census</u>, is also available.

^{11.} Individuals with insufficient information to derive an anonymous key were removed from all PSIS analyses.

The differences between PSIS and the T2202 can be attributed to various factors. At the aggregate level, timeframe is the largest difference between PSIS and the T2202. PSIS is based on an academic year, from approximately May of one year to April of the next, while the T2202 is based on the calendar year, January to December. In addition, some records in PSIS, including all records from certain institutions, had insufficient information to allow a match to the same person from the T2202 file.¹² Similarly, some institutions may not have reported their T2202 information on time and were thus excluded from the data provided to Statistics Canada. Furthermore, some programs (e.g., apprenticeship programs) may be eligible to be reported on the T2202, but not be collected by PSIS. With this information in mind, this verification methodology confirms that the definition of "public postsecondary institution" used for the accompanying infographic provides comparable results between the two data sources.

Comparing the T2202 with the T1FF

To validate the quality and completeness of the T2202 dataset, the <u>T1 Family File</u> (T1FF)¹³ was used to simulate the T2202 dataset. Using this methodology, it is only possible to include individuals who filed taxes for 2020, completed their <u>Schedule 11 form</u>, and entered a positive amount on the line indicating "Eligible tuition fees paid to Canadian educational institutions for 2021" (line 32000). While all designated educational institutions must provide T2202 certificates to all qualifying students, the amount reported on line 32000 is a self-reported amount, based on the information on the T2202 certificate received by the tax filer.

This methodology determined that 2.6 million tax filers in the T1FF paid eligible tuition fees in 2020. This was lower than the 3.1 million students on the T2202 dataset. This lower count on the T1FF was likely due to a portion of students who did not file taxes, or who filed taxes but did not provide the T2202 information on their Schedule 11 form. Many students, including non-working students and those earning less than the personal exemption (some of whom were international students) are not required to file tax returns and may not be aware of possible benefits to filing. Some may not have seen the advantage of filing a Schedule 11 form for low tuition. Schedule 11 indicated, "The fees you paid to attend each institution must be more than \$100 to be eligible."

Finally, integrating the 2020 T1FF and the PSIS 2019/20 and PSIS 2020/21 data makes it possible to estimate the percentage of postsecondary students studying at a public postsecondary institution. This method revealed that 81.2% of students who had paid eligible tuition fees according to the 2020 T1FF were found in either the PSIS 2019/20 or the PSIS 2020/21 dataset. These results are similar¹⁴ to the percentage of students on the T2202 found in either the PSIS 2019/20 or PSIS 2020/21 dataset (83.3%) presented in the previous section. Given the similarity of these results and keeping in mind the reasoning for the differences in the definition of "public postsecondary institution" between the T2202 and PSIS as described previously, this verification methodology confirms that the distribution of postsecondary enrolments by institution type presented in the accompanying infographic is comparable to what is derived using various alternative data sources. This coherence across different data sources provides confidence in the results.

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^{12.} This accounts for 5.9% of all records in the PSIS 2019/20 and PSIS 2020/21 data.

^{13.} The T1FF is a database that combines individuals and variables from the T1 and T4 tax files and the Canada Child Tax Benefit into a family composition file. It includes income, demographic and geographic variables for each tax filer and their spouse, family, and children.

^{14.} Some of the differences may be attributed to differences in the likelihood of attending public postsecondary institutions by international student status. Specifically, if international students were more likely to study at public postsecondary institutions than domestic students were, then the percentage of students with eligible tuition fees according to the 2020 T1FF who are found in either the PSIS 2019/20 dataset or the PSIS 2020/21 dataset is expected to be lower than the percentage of students with eligible tuition fees according to the 2020 T2202 who are found in either the PSIS 2019/20 dataset or the PSIS 2020/21 dataset. This is because international students may return to their home country and not file taxes in Canada.