OVERALL PATTERNS:
MATCH OF THE TDSB 2004-2006 GRADE 9 COHORTS WITH PSIS DATA

DESCRIPTIVE REPORT

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November 2021

A project of the Partnership for Student Transitions, Access, and Research on Tertiary Education
Funded by the "Connecting Partners" SSHRC Partnership Development Grant

THANKS

Many people have contributed to this report, but we'd like to take the opportunity to thank:

Dr. Peter Kitchen and Dr. Li Wang, of the McMaster RDC, for their greatly appreciated assistance and support;

Roula Anastasakos, retired Executive Superintendent of the Toronto District School Board, and Dr. David Cameron, Senior Manager of Research in the TDSB, for their championing of this research in its early stages.

EXECUTIVE SUMMARY

BACKGROUND & RATIONALE

There have been studies tracking Toronto students from Grade 9 to the conclusion of secondary school since 1959. This investigatory descriptive study links Grade 9 cohort data from the Toronto District School Board (TDSB) with information from the Statistics Canada Postsecondary Student Information System (PSIS). The report is intended as an initial baseline for the "Connecting Partners" SSHRC Partnership Development Grant (Prof. David Walters, Principal Investigator).

We focus on three TDSB cohorts: those who started Grade 9 in Fall 2004, Fall 2005 and Fall 2006.These three cohorts provide the best current fit of postsecondary graduation over time, showing the postsecondary outcomes of students to 2017 (the 2017-18 academic year). In total, of the approximately 50,000 students, 25% did not attend a Canadian postsecondary institution; 19% attended but had not completed postsecondary by 2017; 13% graduated from a Canadian college; while 42% graduated from a Canadian university.

This is by no means the complete picture. The initial years of PSIS had higher missing information on college completion, and consequently we know that the college completion rate is going to be somewhat undercounted. As well, we know from other TDSB research that it takes up to ten years for students to have a full cohort completion rate for postsecondary; we will need to go back and examine these and other cohorts at a later point in time. However, it is safe to say that this study has provide as comprehensive look at the initial, direct pathway to postsecondary as is currently possible with available information.

RESULTS

The general picture of postsecondary attainment of the 2004-2006 Grade 9 cohorts reflects the general picture of high school graduation and postsecondary pathways, as seen in the TDSB five-year analysis of students found in a study of the Fall 2004 cohort over a decade ago (Brown, 2010). That is, in the original 2010 TDSB cohort study, the patterns of who went to postsecondary reflected the patterns of high school graduation. We have found that the patterns of *postsecondary completion* reflect the general patterns of *high school graduation* and *direct postsecondary entry*.

Time taken to finish high school appears amongst the strongest predictors of both postsecondary access, and postsecondary graduation. Almost all who graduated high school in four years entered postsecondary, and most graduated from university. Most who took longer than five years to graduate high school, or those with no high school graduation record, did not end up with a postsecondary credential.

Consistency of the gender gap: TDSB research has been showing pronounced gender differences for some decades now, from kindergarten school readiness to postsecondary pathways. It should not be surprising that these trends continue to final postsecondary attainment: slightly under two thirds of female students graduated postsecondary, compared to slightly under half of male students.

Neighbourhood Income: Students living in lower-income neighbourhoods are less likely to enter postsecondary study, compared to those in high income neighbourhoods. However, differences may not be as pronounced once students enter postsecondary - a trend worth further investigation.

Student Language: Students were roughly split between those who spoke English only at home, and those who spoke English and another language. In total, those speaking English only and those speaking 16 other key languages accounted for most TDSB students. As seen in Table 7, there was a wide variable between student languages.

Grade 9 Program of Study: The streaming process of Ontario is currently under close examination. Most students who took Academic courses in Grade 9 transitioned into postsecondary, while over two thirds completed a postsecondary credential. The majority of students taking Applied or Locally developed courses did **not** transition into postsecondary.

Grade 9 achievement: Grade 9 achievement was very strongly connected to postsecondary completion patterns:
- The majority of students with **eight or more credits** at the end of Grade 9 completed a postsecondary credential, while those with seven or fewer credits did not.
- The mean **Grade 9 absenteeism** of university graduates was around 3%; the mean absenteeism of college graduates was around 4%; the mean absenteeism rate of those who did not get into postsecondary in Canada was 10%.
- More than two thirds of students with a 'B' or higher in **Grade 9 English** and in **Grade 9 Mathematics** graduated from postsecondary, while most of those with a 'D' or lower in Grade 9 did not graduate from postsecondary.
- The higher the **Grade 9 average mark**, the higher the level of postsecondary education. Thus, students who finished university had an average Grade 9 mark of 78 (B+) while students who did not apply to postsecondary at all had an average Grade 9 mark of 57 (D+).

Suspensions: Slightly under a quarter of students (24%) had been suspended at some point over their time in public school. Students who had been suspended were over twice as likely not to transition into postsecondary (49% compared to 18% of those not suspended) and were a third as likely to finish university (15% compared to 50% of those not suspended).

Special Education Needs: Slightly over half of students with Special Education Needs (excluding Gifted) entered a Canadian postsecondary institution - a slightly higher proportion than would have been predicted from the original 2010 TDSB study.[1] Somewhat over a quarter of students with an exceptionality (excluding Gifted) graduated with a postsecondary credential while around a third of students with an IEP only (referred as 'Nonidentified' by the Ministry of Education) graduated with a postsecondary credential.

Completed Grade 12 Courses in English: Almost two thirds of students in the cohorts completed a Grade 12 U (university) course in English. Because almost three quarters of those students completed a postsecondary credential, they accounted for almost all university completions (92%) and the majority of college completions (58%). In contrast, less than a third of students who completed a Grade 12 C (college) course in English completed a postsecondary credential. Grade 12 course patterns demonstrate how the Ontario streaming process that starts with Grade 9 Program of Study then connects to Grade 12 courses, and hence through postsecondary.

The 'Grey Area' of Postsecondary Application and Enrolment

There are students who make some sort of initial effort to register into postsecondary: they partially fill out a university or college application process (through OUAC and/or OCAS); apply to postsecondary; confirm an offer of admission; and even attend initial classes, but go no further into postsecondary education. And while many will re-apply or re-enrol at a later point in time, others will not.

How many students are part of this 'grey area' cannot be properly measured, but it is probably a substantial number. The quarter of TDSB students in this report who did not *attend* postsecondary includes many students who had enough interest in postsecondary that they *applied*. Yet these applicants, despite their interest, were either unsuccessful in their application; or were successful but unable to take up an offer of admission; or they even showed up on campus, but not long enough to be part of the official enrolment count. This important subgroup deserves greater study, despite the challenges in quantification.

[1] Presumably some students with Special Education Needs entered postsecondary after the five-year TDSB study.

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INTRODUCTION

There have been studies tracking Toronto students from Grade 9 to the conclusion of secondary school since the Toronto Board 1959 cohort (Wright, 1967). Following the amalgamation of Toronto legacy boards, the Toronto District School Board's Research and Development department created a continuously updated dataset of Grade 9 cohort students. Each TDSB cohort is followed from Grade 9 for five years, until most students have graduated with an Ontario Secondary School Diploma (OSSD) and made the direct transition into postsecondary.

Earlier analyses of the Grade 9 Cohort Dataset linked information from Ontario university and college applications data (Brown 2010, Brown and Tam 2016) and postsecondary information from specific postsecondary institutions (e.g. Brown, Davies and Chakraborty, 2019; Parekh, Brown and James, 2020). This investigatory descriptive study goes to the next step in linking TDSB Grade 9 cohort data with information from the Statistics Canada Postsecondary Student Information System (PSIS), a component of the Education and Labour Market Longitudinal Platform (ELMLP). The report is intended as an initial baseline for the "Connecting Partners" SSHRC Partnership Development Grant (Prof. David Walters, Principal Investigator).

In this report we focus on three TDSB cohorts out of thirteen available cohorts: those who started Grade 9 in Fall 2004, Fall 2005 and Fall 2006. These three cohorts should provide the best available fit of postsecondary graduation over time, with the start of PSIS for most postsecondary institutions as of Fall 2009.

METHODOLOGY

1. OVERVIEW OF THE TDSB GRADE 9 COHORT DATASET

The TDSB's Grade 9 Cohort Dataset provided to Statistics Canada consists of thirteen Grade 9 cohorts, that is, students who started in Grade 9 between Fall 2000 and Fall 2012. Grade 9 students are 13-15 years old at the time of entry as of Fall of their first year of secondary study (the vast majority are 14 years of age, using year of birth, when they start Grade 9).

The TDSB Grade 9 cohort system started in Fall 2000 since that was the first full year of the current Ontario OSS secondary school curriculum (that is, all students took OSS courses and participated in the Grade 10 Literacy test, the OSSLT).[2]

Each cohort was followed by the TDSB for five full years. For example, students who started in Grade 9 in Fall 2004 were followed until Fall 2009 (October 31 2009), that is, after the conclusion of Year 5 secondary and the beginning of Year 6. Note that while Ontario secondary curriculum works on the assumption of finishing in four years, in fact many continue into Year 5 and around one in twenty is still attending in Year 6.

In total the number of TDSB students in this Grade 9 cohort dataset is over 230 K.

[2] Students in the Fall 1999 cohort took a hybrid of OSS and the previous OS:IS courses, and the pilot OSSLT completed that year was not mandatary. Therefore the 2000-01 Grade 9 cohort was the first OSS cohort with all requirements in place, and consistent courses offered.

2. The Merge Process of TDSB Data to the Labour Market Longitudinal Platform (ELMLP)

Over 2019-2020, through funding from the Ontario Council on Articulation and Transfer (ONCAT), Statistics Canada linked students in the TDSB dataset to 'register_group_id', the common linking variable of the Labour Market Longitudinal Platform (ELMLP). This allowed a link to information from PSIS on postsecondary entry and graduation across Canada.[3]

3. Use of the TDSB Cohorts (Start of Grade 9) Instead of PSIS Entry Date (Start of Postsecondary Studies)

The TDSB cohort process commenced when students started their secondary studies in the TDSB as beginning Grade 9 students. This allows a much more precise measure of postsecondary entry after beginning of high school. In contrast, PSIS has no information previous to postsecondary studies, and therefore 'first year' in PSIS can be two months or ten years after the completion of secondary school.

Earlier TDSB research has already shown the importance of Grade 9 achievement indicators in terms of graduation from postsecondary (Brown, Davies and Chakraborty, 2019; Parekh, Brown and James, 2020). It therefore makes sense to start from this earlier baseline.

Finally, a very important focus of any population study should be those who do not enter postsecondary, which is not examined by PSIS, but which can be examined through TDSB cohorts.

4. Why the 2004-2006 TDSB cohorts?

The PSIS process started only with Fall 2009 (which would include earlier entries graduating after Fall 2009). The most complete information would be from the 2005 cohort, students starting Grade 9 in Fall 2005, the main entry to postsecondary of those students in Fall 2009. Using the 2004 cohort would provide most graduation information for those students (missing only information on students who exited prior to Fall 2009, without re-entering at any time after Fall 2009).

Secondly, there is an intersection of cohort and time in secondary school: it takes up to a decade after high school graduation for a maximum university graduation rate (see Parekh, Brown, and James, 2020). Most students in the TDSB who started Grade 9 in Fall 2004 directly entered Ontario postsecondary between Fall 2008 and Fall 2009, while most who started Grade 9 in Fall 2006 entered postsecondary between Fall 2010 and Fall 2011. The Fall 2006 cohort will have a slightly lower graduation rate compared to earlier cohorts, and since some students are still completing their studies. The Fall 2004 cohort will have a slightly higher graduation rate than later cohorts for the same reason. Given these patterns, the combination of the Fall 2004, Fall 2005 and Fall 2006 cohorts has a postsecondary graduation rate approximate to that of the Fall 2005 cohort[4]. Using three cohorts provides a study size triple that of the 2005 cohort alone (approximately 50K, including those who did not enter postsecondary). This allows us to look in more detail at smaller subgroups.

[3] See Walters et al., 2020 and Walters et al., 2021.

[4] That is, the Fall 2004 cohort will have a somewhat higher graduation rate compared to the Fall 2005 cohort, the Fall 2006 cohort will have a somewhat lower graduation rate. Consequently, the combined college/university graduation rate of the three Fall 2004-Fall 2006 cohorts is 56%, which is the same as the college/university graduation rate of the Fall 2005 cohort alone.

5. HYPOTHESES

This descriptive report is in many ways an update of the TDSB Grade 9 cohort of Fall 2004 (Brown 2010), which followed a Grade 9 cohort from the beginning of secondary studies in Fall 2004, to the completion of Year 5 secondary in Fall 2009. Among the key findings of that report:

> *[Secondary school] Graduation and post-secondary access have slowly changed from being the experience of a small proportion of students, to the experience of the majority. That being said, students are less likely to graduate and go to post-secondary if they took a majority of their Grade 9 courses outside the Academic program of study; had a mark of less than 60 in the compulsory Grade 9 courses of English, Geography, Mathematics, or Science; achieved fewer than 7 credits by the end of Grade 9 and fewer than 15 credits by the end of Grade 10; resided in lower income neighbourhoods; were older than 14 when they started secondary school; were born in the English-speaking Caribbean; spoke Portuguese, Spanish, or Somali at home; had high Grade 9 absenteeism; were deferred or absent from writing the Grade 10 Literacy test; or were male. The variable with the strongest relationship to university confirmation is Grade 9 absenteeism. (Brown, 2010, p. 1).*

The 2004 cohort examined in the 2010 report is the first of the three cohorts examined in our Descriptive Report. Our overview will therefore re-examine many of these secondary school variables, but with the outcome of first postsecondary credential, rather than high school graduation. As well, additional variables not included in the initial 2010 report will be examined. Among the hypotheses to be examined:

1. The relationship of socio-demographic and school variables to five-year high school graduation, outlined in the Fall 2004-Fall 2009 Grade 9 Cohort study, will be generally replicated in the examination of postsecondary attendance and completion patterns.

2. In particular, Grade 9 streaming/program of study (most noticeably, taking Academic versus all other programs of study), absenteeism, subject achievement, and student Special Education Needs status, is connected to attending postsecondary, and, for those who make the transition to postsecondary, completion of a credential within the timeframe of the study.

3. There is an extremely strong relationship of five-year postsecondary pathways (based on OUAC and OCAS data) with postsecondary attendance and completion patterns, such that postsecondary pathways at the end of five years of high school are a crude proxy of postsecondary completion.

RESULTS

1. THE POSTSECONDARY GRADUATION VARIABLE

Students are divided into four categories of postsecondary outcomes based on PSIS data:

1. **No postsecondary in Canada:** The student did not attend postsecondary by end of PSIS study (2017)
2. **Postsecondary but did not graduate**: Started postsecondary in Canada, but did not graduate by end of PSIS study (2017)
3. **Graduated college:** first credential completed in a Canadian college
4. **Graduated university**: first credential completed in a Canadian university.

2. POSTSECONDARY GRADUATION

Table 1 shows the postsecondary outcomes of students to 2017 (the 2017-18 academic year). The vast majority of TDSB students go to postsecondary (75%) and the majority complete postsecondary (56%). However, this also means that a quarter of students do not go to postsecondary and almost a fifth do not complete in a timely way (as defined as the end of the PSIS study). The remainder of the report will focus on overall patterns of postsecondary graduation.

Note that the graduation information reported below is probably slightly under-reported (for more detail see "Overall Conclusions", section 6).

Table 1: Postsecondary Outcomes to 2017

Postsecondary Graduation Status	Frequency (N)	Percent
No postsecondary in Canada	12640	25.1
Postsecondary but did not graduate	9800	19.4
Graduated college	6800	13.5
Graduated university	21210	42.0
Total	50450	100.0

Source: TDSB-PSIS Link. This study looks at the *first* postsecondary credential achievement by students. Many students will then continue their postsecondary education and attain additional credentials, for example, a certificate in a college 'foundation' course and then a university undergraduate degree, or a postgraduate education.

3. *Time Taken to Complete Secondary School and Postsecondary Graduation*

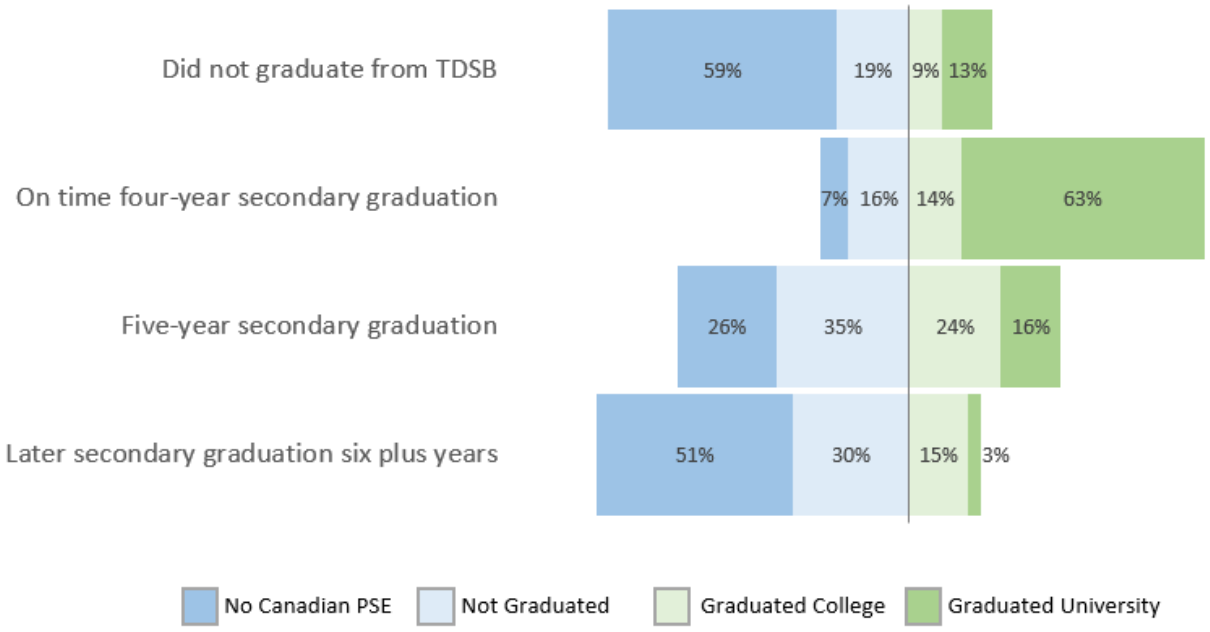
Table 2 shows the relationship between the time taken to finish secondary school in the TDSB, and graduation from a Canadian postsecondary institution. This variable was created specifically for this study, based on the Ontario Secondary School Diploma (OSSD) information in the TDSB.

First, a clarification. According to this, almost a quarter of students who did not graduate from high school in the TDSB completed a postsecondary credential. In fact, many of those students transferred out of the TDSB to other boards prior to graduation (15% of the Grade 9 cohort of Fall 2004 did so- see Brown, 2010, p. 4), and so would have graduated secondary school in other boards. Others may have later returned to secondary study through adult and continuing education.

Even with these provisos and options, it is clear enough that over three quarters of students who left the TDSB without a high school diploma did not have a postsecondary credential within the timelines of the analysis- they never entered Ontario postsecondary study (59%) or they started postsecondary without completing a credential (19%).

Table 2: Secondary School Graduation Status and Postsecondary Graduation Status

Secondary School Graduation Status	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Did not graduate from TDSB	59.3%	19.0%	8.6%	13.1%	100.0%	12910
On time four-year secondary graduation	7.4%	15.8%	13.5%	63.3%	100.0%	29330
Five-year secondary graduation	26.0%	34.5%	23.9%	15.6%	100.0%	5570
Later secondary graduation six plus years	51.1%	30.3%	15.2%	3.4%	100.0%	2640



For the vast majority of students who successfully completed secondary school in the TDSB, there was a very strong association of time taken to complete their secondary school diploma requirements, and postsecondary graduation. The majority of TDSB Grade 9 students completed an OSSD within four years (29,330 or 58%). It would appear that for these students, four-year high school completion is virtually synonymous with postsecondary access—that is 93% transitioned to a Canadian postsecondary institution, and over three quarters completed a postsecondary credential, mostly through university. However, five-year high school completion provides a quite different picture: almost three quarters (74%) transitioned into postsecondary, but less than half of all five-year graduates completed a postsecondary credential (24% at college and 16% at university). For students who completed a secondary school diploma after five years, less than half transitioned to postsecondary, and less than a fifth completed a postsecondary credential (most from college).

4. *Five-Year Postsecondary Confirmation Status at end of High School*

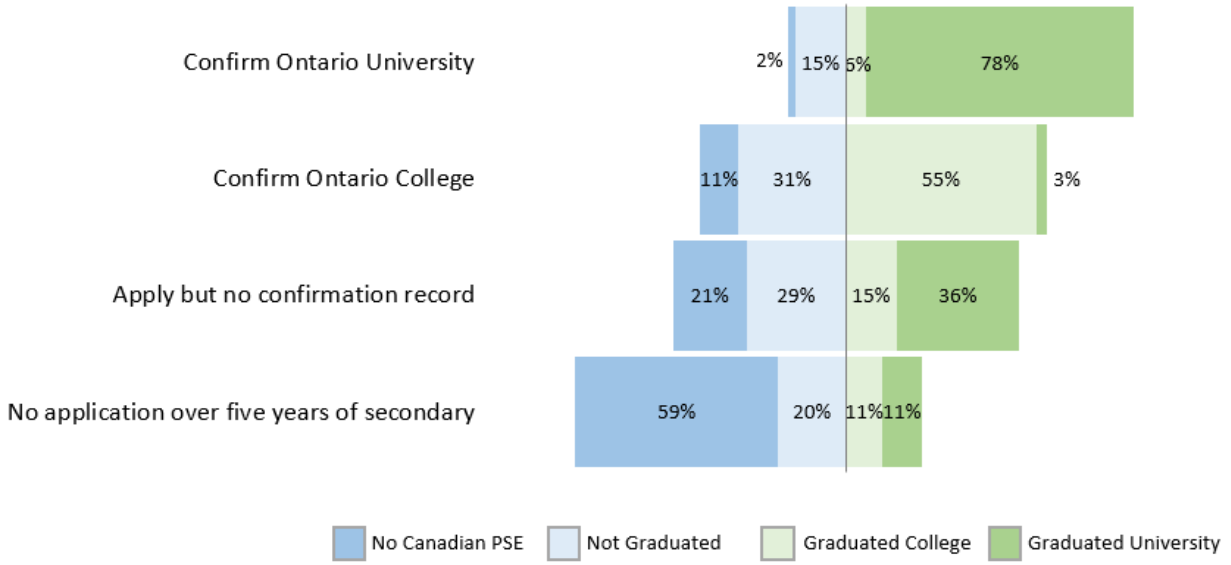
The TDSB cohort studies use a 'confirmation' variable derived from the Ontario university and college application authorities (OUAC and OCAS) to determine who had confirmed an offer of admission to an Ontario postsecondary institution by the end of five years of secondary school study.

As seen in Table 3, there was a very strong relationship of both postsecondary pathways and secondary graduation patterns, to postsecondary graduation, replicating earlier U of T and York University research (Brown, Davies, and Chakraborty, 2019; Parekh, Brown, and James, 2020). [5] This validation is useful to know since the 'confirmation' information provided to school boards from OUAC and OCAS, is increasingly being used as part of more detailed guidance (e.g. Rousell et al. 2017).

An additional insight is that the majority of students who applied but did not confirm postsecondary (according to TDSB records), did ultimately make the transition to postsecondary; and most who the transition to postsecondary did graduate. Some of these students attended postsecondary outside Ontario; others entered postsecondary after time in the workplace.

Table 3: Five-Year Postsecondary Confirmation Status and Postsecondary Graduation

Five-Year Postsecondary Confirmation Status	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Confirm Ontario University	2.1%	14.6%	5.6%	77.7%	100.0%	22360
Confirm Ontario College	11.1%	31.1%	54.9%	3.0%	100.0%	5410
Apply to postsecondary but no confirmation record	21.1%	28.8%	14.6%	35.5%	100.0%	4590
No postsecondary applications over five years of secondary	58.6%	19.6%	10.6%	11.2%	100.0%	18090



[5] The number of students in Table 3 who did not confirm postsecondary at the end of five years, but ultimately ended up graduating from postsecondary, is inflated. This is due to a number of students who transferred out of the TDSB to other boards. While these students would have applied to postsecondary from those other boards, the TDSB would have no record of this. Therefore, those students appear in Table 3 as "No postsecondary applications over five years of secondary" although they did apply to postsecondary from other boards outside the TDSB.

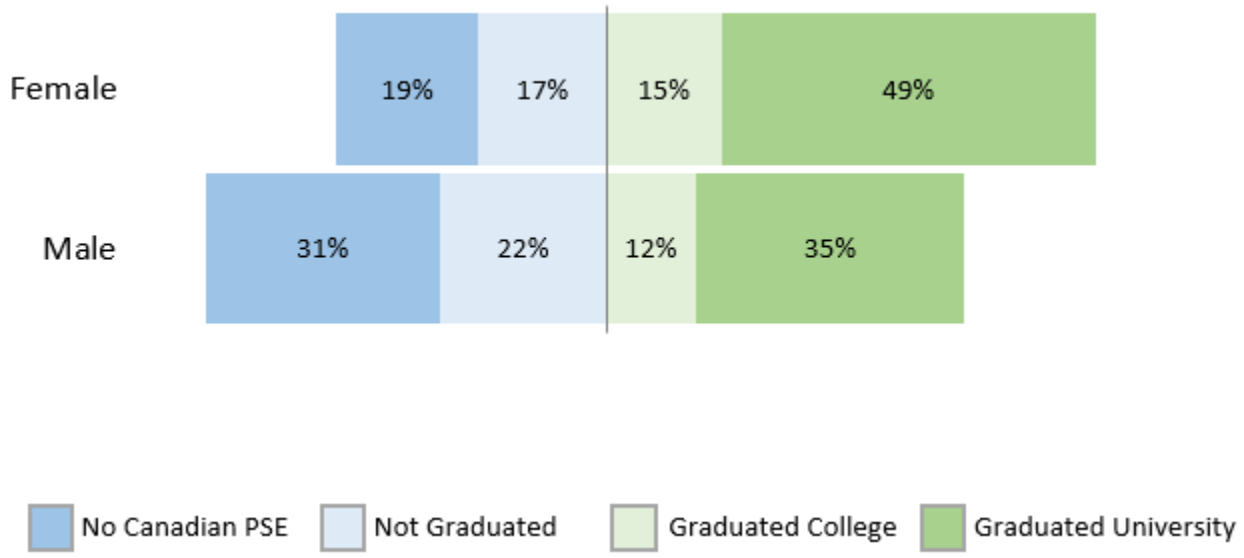
5. *Socio-demographic Variables*

5a. Gender

The strong gender patterns seen in earlier TDSB studies (Brown, 2010) are likewise reflected in postsecondary achievement patterns. Female students are more likely to have completed both college and university, while male students are more likely to start postsecondary without finishing, or not attend postsecondary at all.

Table 4: Gender

Gender	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Female	18.8%	16.8%	15.2%	49.2%	100.0%	24360
Male	30.9%	21.9%	11.8%	35.4%	100.0%	26080

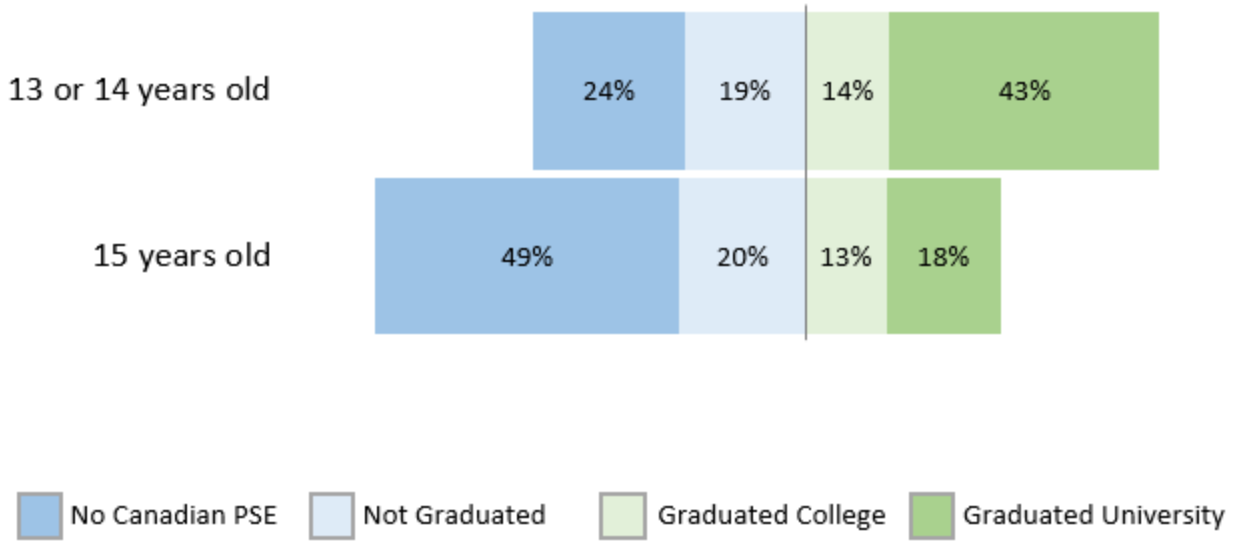


5b. Age When Started Grade 9

Students who started Grade 9 a year older than their compatriots, were also much less likely to access postsecondary, and to graduate from university, again reflecting earlier secondary graduation patterns. See Table 5.

Table 5: Age in Grade 9 (Using Year of Birth)

Age in Grade 9 (Using Year of Birth)	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
13 or 14 years old	24.0%	19.4%	13.5%	43.1%	100.0%	48210
15 years old	48.7%	20.1%	12.9%	18.3%	100.0%	2240

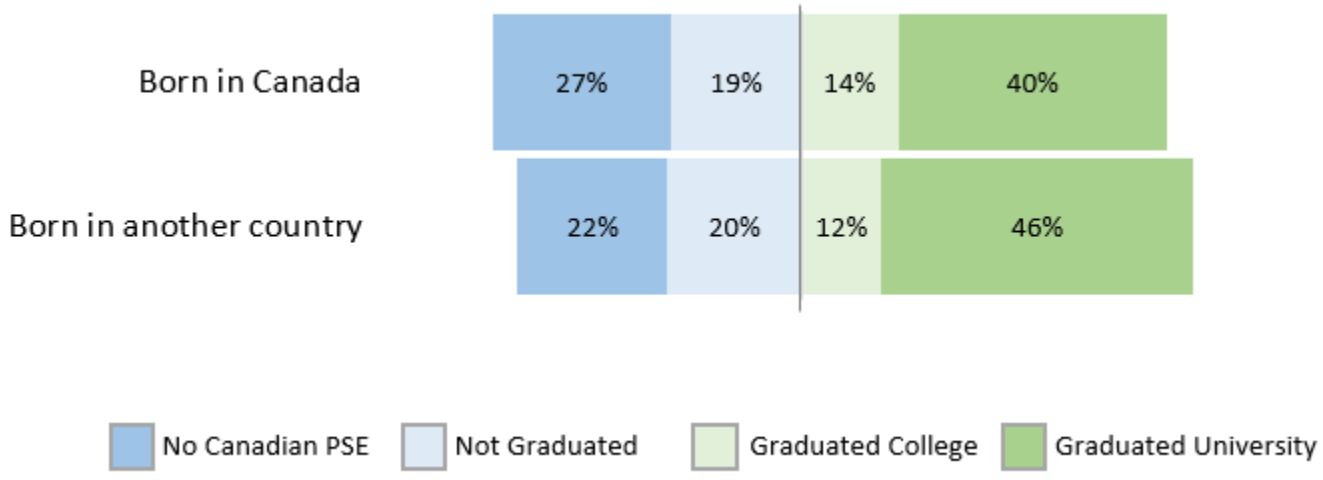


5c. Students Born Inside and Outside Canada

Of TDSB students who started Grade 9, approximately two thirds were born in Canada and one third were born outside. As seen in Table 6, students born outside Canada were somewhat more likely to complete university, while students born in Canada were slightly more likely to graduate from college.

Table 6: Born inside and outside of Canada

Birthplace Status	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Born in Canada	26.5%	19.3%	14.3%	39.9%	100.0%	33090
Born in another country	22.2%	19.8%	11.9%	46.1%	100.0%	17340

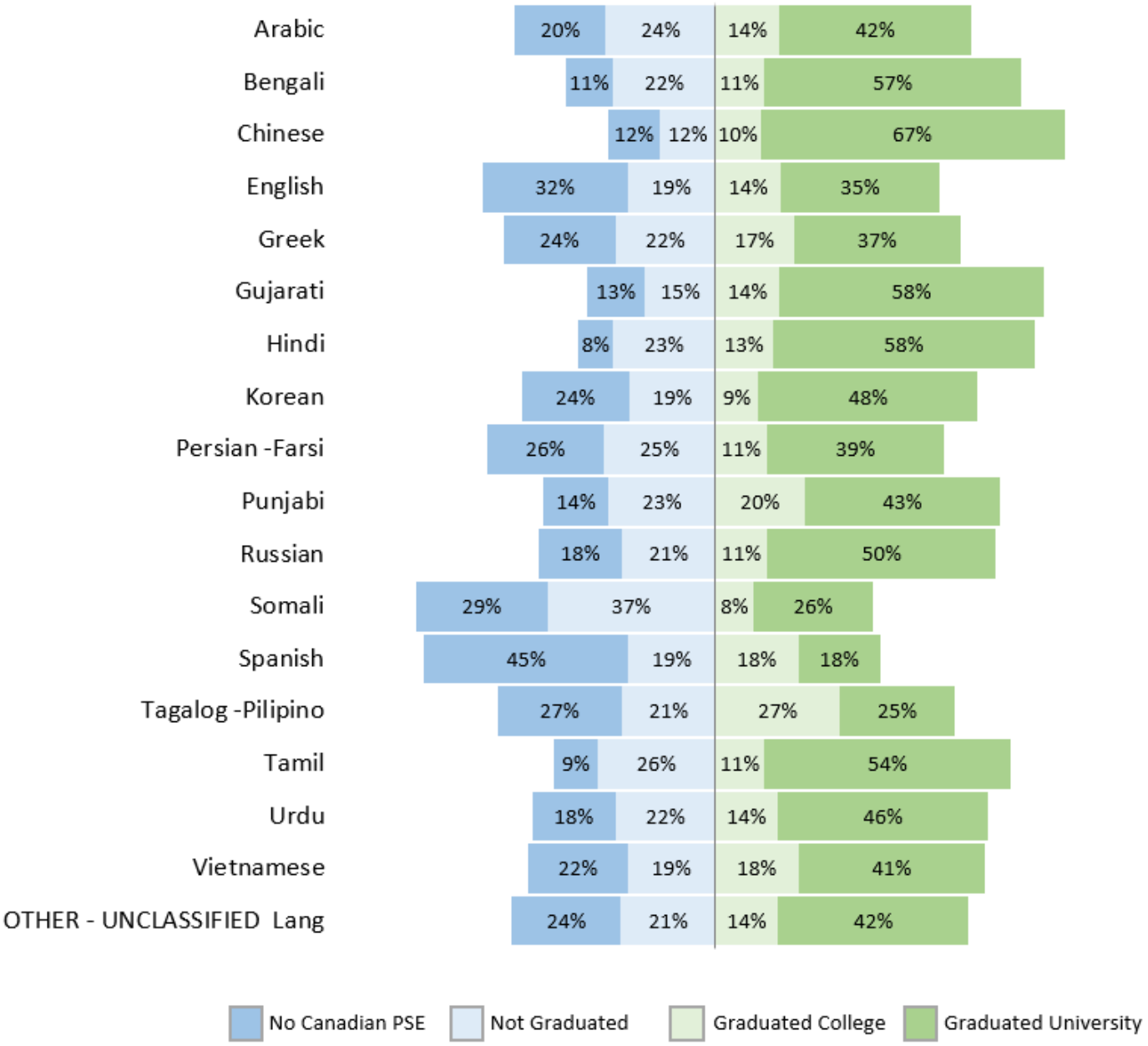


5d. Key Student Languages

Students were roughly split between those who spoke English only at home, and those who spoke English and another language (this information was derived from the TDSB SIS system). In total, those speaking English only and those speaking 16 other key languages accounted for most TDSB students. As seen in Table 7, there was a wide variable between student languages.

Table 7: Key Student Languages

Key Student Language	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Arabic	20.0%	24.0%	14.0%	42.0%	100.0%	500
Bengali	10.5%	22.4%	10.5%	56.6%	100.0%	760
Chinese	11.5%	12.1%	9.8%	66.6%	100.0%	6520
English	31.7%	19.3%	14.4%	34.6%	100.0%	24860
Greek	24.4%	22.0%	17.1%	36.6%	100.0%	410
Gujarati	12.8%	15.4%	14.1%	57.7%	100.0%	780
Hindi	7.5%	22.5%	12.5%	57.5%	100.0%	400
Korean	23.6%	18.9%	9.4%	48.1%	100.0%	1060
Persian -Farsi	25.5%	24.5%	11.3%	38.7%	100.0%	1060
Punjabi	14.3%	23.4%	19.5%	42.9%	100.0%	770
Russian	18.2%	20.5%	11.4%	50.0%	100.0%	880
Somali	28.6%	36.9%	8.3%	26.2%	100.0%	840
Spanish	44.7%	19.1%	18.1%	18.1%	100.0%	940
Tagalog -Pilipino	27.3%	20.5%	27.3%	25.0%	100.0%	440
Tamil	9.4%	25.9%	10.7%	54.0%	100.0%	2240
Urdu	18.3%	21.9%	13.6%	46.2%	100.0%	1690
Vietnamese	21.7%	19.3%	18.1%	41.0%	100.0%	830
OTHER - UNCLASSIFIED Lang	23.9%	20.7%	13.7%	41.8%	100.0%	4980


Arabic
20%
24%
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Bengali
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Tagalog -Pilipino
27%
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27%
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Tamil
9%
26%
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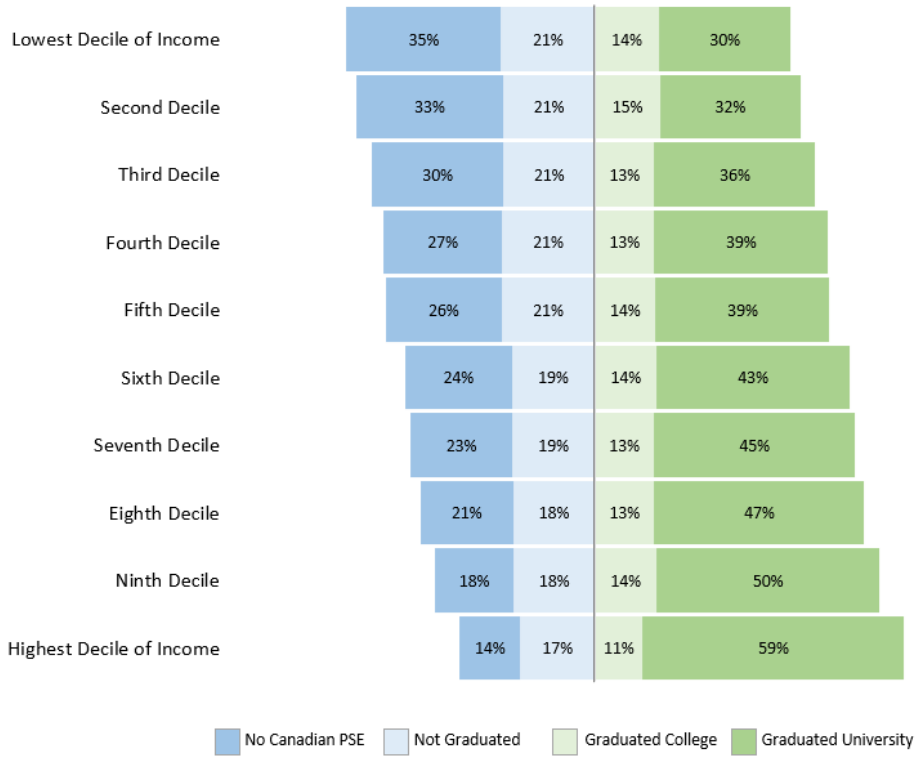
Urdu
18%
22%
14%
46%
Vietnamese
22%
19%
18%
41%
OTHER - UNCLASSIFIED Lang
24%
21%
14%
42%
No Canadian PSE
Not Graduated
Graduated College
Graduated University

5e. Neighbourhood Income

Students were categorized into ten deciles of income: groupings of 10, from lowest decile or 10% of students with the lowest income, to the highest decile or 10% of students with the highest income.[6] The same sort of large differences earlier seen in high school graduation rates and postsecondary access (e.g. Brown 2010, Brown, Marmureanu & Tam, 2017) can also be seen with postsecondary graduation rates (Table 8).

Table 8: Deciles of Neighbourhood Income

Deciles of Income	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Lowest Decile of Income	34.8%	21.1%	14.4%	29.8%	100.0%	4940
Second Decile	33.0%	20.7%	14.7%	31.6%	100.0%	4690
Third Decile	29.6%	20.6%	13.4%	36.3%	100.0%	4760
Fourth Decile	26.5%	21.0%	13.4%	39.1%	100.0%	4860
Fifth Decile	26.1%	21.0%	13.7%	39.2%	100.0%	4900
Sixth Decile	24.0%	18.7%	14.0%	43.3%	100.0%	5290
Seventh Decile	22.9%	18.6%	13.3%	45.3%	100.0%	4900
Eighth Decile	20.9%	18.4%	13.4%	47.3%	100.0%	4840
Ninth Decile	17.7%	18.3%	13.9%	50.2%	100.0%	5040
Highest Decile of Income	13.6%	16.8%	10.8%	58.9%	100.0%	5300



[6] This was done by matching the six digit postal code of student residence with the median income of the dissemination area (DA) in which the students lived, using the variable ECYHNIMED from Environics Analytics (2018 dollars). The categories of income in Brown 2010 used a similar methodology but linked to income from the 2006 federal Census.

6. SCHOOL/STRUCTURAL VARIABLES

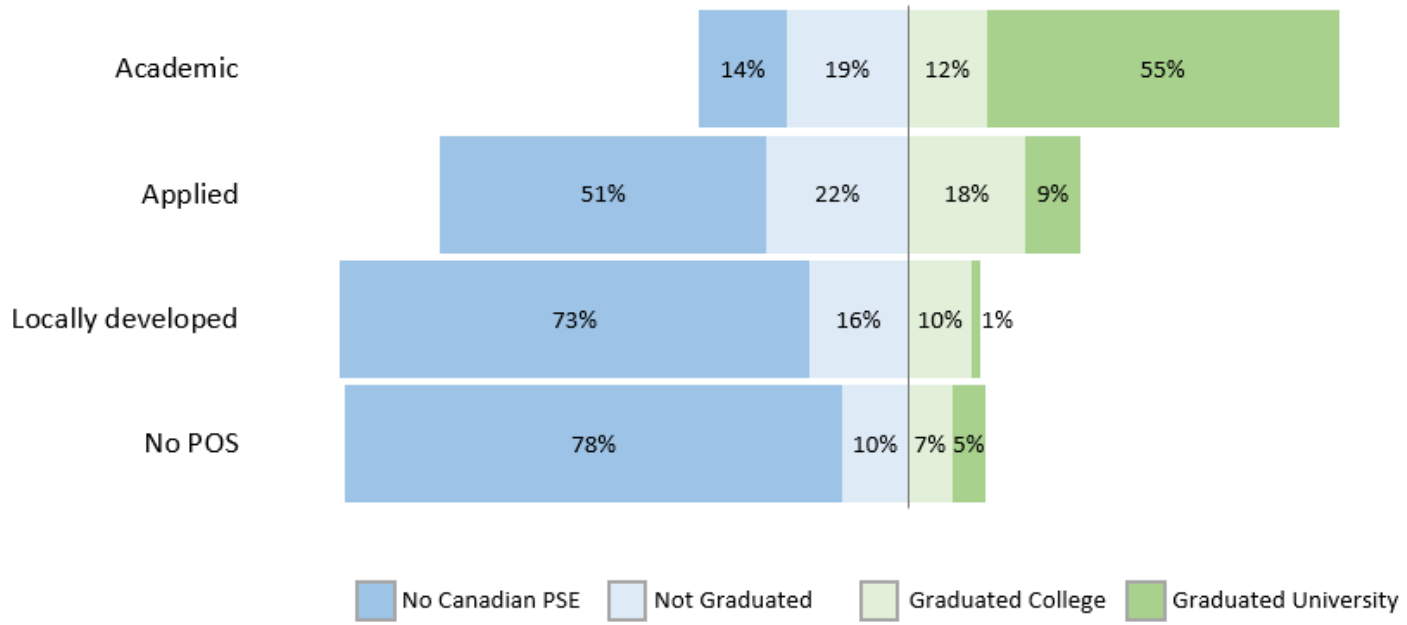
6a. Grade 9 Program of Study

In the current Ontario (OSS) curriculum, students have a choice of taking Academic, Applied, or Locally-developed courses in Grade 9 and 10. In theory, taking Academic courses is the road to university while taking Applied courses is the road to college, while Locally-developed courses prepare students for the workplace. However, the gap between theory and practice has been documented for nearly twenty years (e.g. Brown 2003; Brown 2006; Parekh, 2013; People for Education, 2015). Numerous TDSB studies including the 2004-2009 cohort study (Brown 2010), clearly demonstrated that Grade 9 students were less likely to graduate from high school, and transition into university or college, if they took Applied or Locally-developed courses. Indeed, according to Brown 2010 (p. 2), "we … have in practice a post-secondary stream (students taking Academic courses in Grade 9) and a workplace stream (students taking other Programs of Study in Grade 9)."

Table 9 shows this in more detail. The majority of TDSB students took Academic courses, and of those students the vast majority transitioned into postsecondary, while over two thirds completed a postsecondary credential (55% completed a university while 12% completed a college credential). The majority of students taking non-Academic courses (Applied, Locally developed or no defined Program of study) did not transition into postsecondary over the time of the study. Slightly over a quarter of students taking the Applied POS graduated with a postsecondary credential, and slightly over a tenth of students taking Locally-developed graduated from postsecondary.

Table 9: Grade 9 Program of Study

Grade 9 Program of Study	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Academic	13.6%	19.0%	12.3%	55.0%	100.0%	36730
Applied	51.0%	22.1%	18.4%	8.5%	100.0%	10930
Locally developed	73.2%	15.5%	10.0%	1.4%	100.0%	2200
No POS	77.6%	10.3%	6.9%	5.2%	100.0%	580

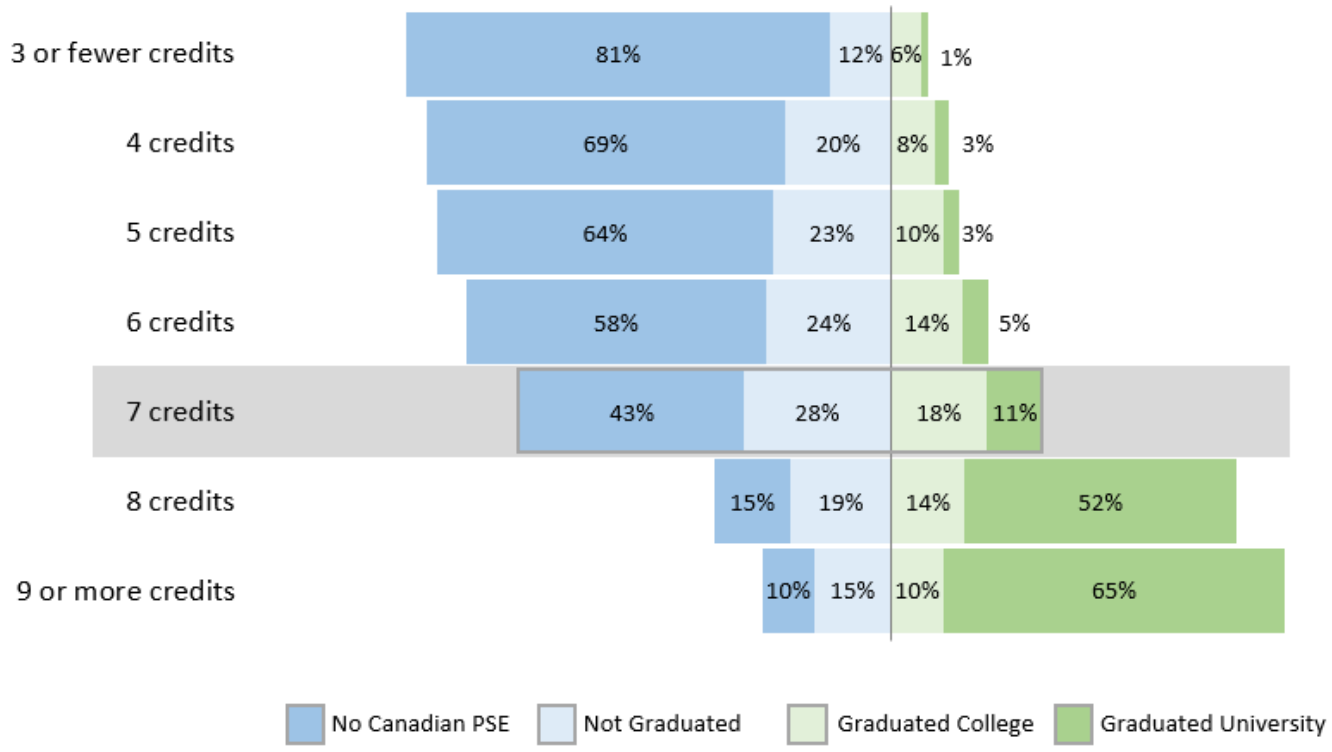


6b. Grade 9 Credit Accumulation

For a generation, a strong relationship between Grade 9 credit accumulation and high school graduation/postsecondary pathways has been clearly documented (e.g. Brown, 1993; Brown 2010); more recently this has been followed to university completion (Brown, Davies, and Chakraborty, 2019; Parekh, Brown, and James, 2020). Table 10 should therefore be no surprise. The majority of students who completed six or fewer credits by the end of Grade 9, did not make the transition to postsecondary. Of students with 7 credits by the end of Grade 9, slightly over half made the transition to postsecondary but less than a third (29%) completed a postsecondary credential. In contrast, the vast majority of students with 8 or more credits transitioned to postsecondary, and most completed a postsecondary credential. The contrast of Grade 9 credit accumulation and university completion cannot be stronger: while only 11% of students with 7 credits by the end of Grade 9 ultimately complete a university degree, this increases to 52% of those with 8 credits and 65% of those with 9 credits.

Table 10: Credit Accumulation at End of Grade 9

Credits Completed by End of Grade 9	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
3 or fewer credits	81.2%	11.6%	5.8%	1.4%	100.0%	2920
4 credits	68.8%	20.2%	8.3%	2.8%	100.0%	1090
5 credits	64.2%	22.6%	10.2%	2.9%	100.0%	1370
6 credits	57.6%	23.8%	13.8%	4.8%	100.0%	2100
7 credits	42.7%	28.2%	18.4%	10.7%	100.0%	4190
8 credits	14.8%	19.1%	14.2%	51.9%	100.0%	35050
9 or more credits	10.1%	14.6%	10.1%	65.3%	100.0%	3570



6c. Grade 9 Absenteeism

The 2004-2009 study considered absenteeism to be the variable with the strongest relationship to postsecondary access (Brown, 2010). As seen in Table 11, this strong relationship continued through postsecondary. The largest category was very low Grade 9 absenteeism, where students missed 0-2% of classes: two thirds graduated from a Canadian postsecondary institution while over half graduated from university. In contrast, an absenteeism rate of over 10% is traditionally considered a threshold for high risk, and we find that the majority of students with over 10% Grade 9 absenteeism did not make the transition to postsecondary.

Table 12 shows the mean Grade 9 absenteeism of postsecondary graduation categories. The mean Grade 9 absenteeism of university graduates was around 3%; the mean absenteeism of college graduates was around 4%; the mean absenteeism rate of those who did not get into postsecondary in Canada was 10%.

Table 11: Grade 9 Absenteeism

Grade 9 Absenteeism (% Missed of Classes)	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
0 to 2%	14.4%	17.3%	13.3%	55.0%	100.0%	22460
3 to 5%	22.5%	21.5%	14.9%	41.1%	100.0%	12490
6 to 10%	32.9%	23.2%	14.2%	29.6%	100.0%	7930
11 to 20%	51.0%	21.1%	12.1%	15.8%	100.0%	3980
21% or more	75.2%	13.6%	6.3%	4.9%	100.0%	2060

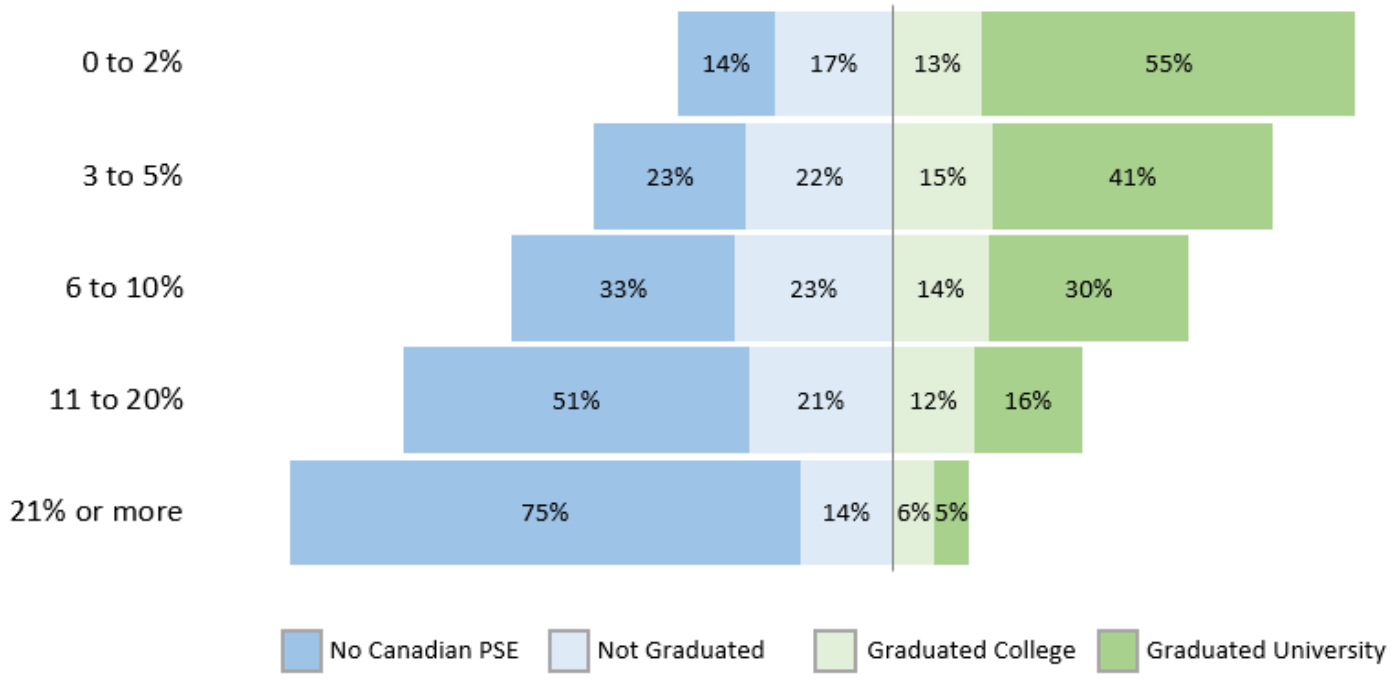


Table 12: Mean Grade 9 Absenteeism of Graduation Categories

Graduation Categories	Mean Grade 9 Absenteeism
No postsecondary in Canada	9.64
Postsecondary but did not graduate	5.19
Graduated college	4.44
Graduated university	2.92
Total	5.25

6d. Grade 9 English and Mathematics

Achievement in Grade 9 English and Mathematics (as well as Geography and Science) had been shown to be strongly connected to high school graduation and to university completion (see Brown, 2010; Brown, Davies and Chakraborty, 2019).[7] Similar strong patterns can be seen in Tables 13 and 14. Of Grade 9 'A' students in Mathematics, 72% graduated from university and 7% graduated from college; of Grade 9 'A' students in English, 73% graduated from university and 8% graduated from college. In contrast, around two thirds of those who did not complete a Grade 9 Math credit, and slightly under three quarters of those who did not complete a Grade 9 English credit, did not make the transition into postsecondary study.[8]

Approximately 3K students did not complete a Grade 9 credit in English, but rather completed an English Language Learner course (ESL-ELL). Ultimately, over two thirds of these ELL students made the transition into a Canadian postsecondary institution and around half (50%) completed a postsecondary credential, slightly lower than the overall 56% completion rate of the full TDSB cohorts.

Table 13: Grade 9 Achievement in Mathematics

Grade 9 Achievement in Mathematics	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
No Math Credit in Grade 9	65.6%	19.1%	10.7%	4.5%	100.0%	6170
Math mark of 50-59	33.9%	25.4%	19.4%	21.2%	100.0%	10650
Mark of 60-69	22.5%	23.7%	17.9%	35.9%	100.0%	9640
Mark of 70-79	15.0%	20.1%	13.6%	51.2%	100.0%	10110
Mark of 80 plus in Grade 9	9.3%	11.6%	6.8%	72.3%	100.0%	13880

[7] Science and Geography were not included in this iteration of the Grade 9 Cohort dataset because they had not yet been calculated in the earlier TDSB cohorts (2000-2002).

[8] A more detailed analysis of TDSB Grade 9 Mathematics achievement found that most of those who failed Grade 9 Mathematics eventually later passed this credit, but most were unable to catch up to the later Mathematics requirements needed to make the transition into postsecondary. The same pattern likely extended to the other compulsory Grade 9 subjects of English, Science, and Geography. (See Brown et al, 2015).

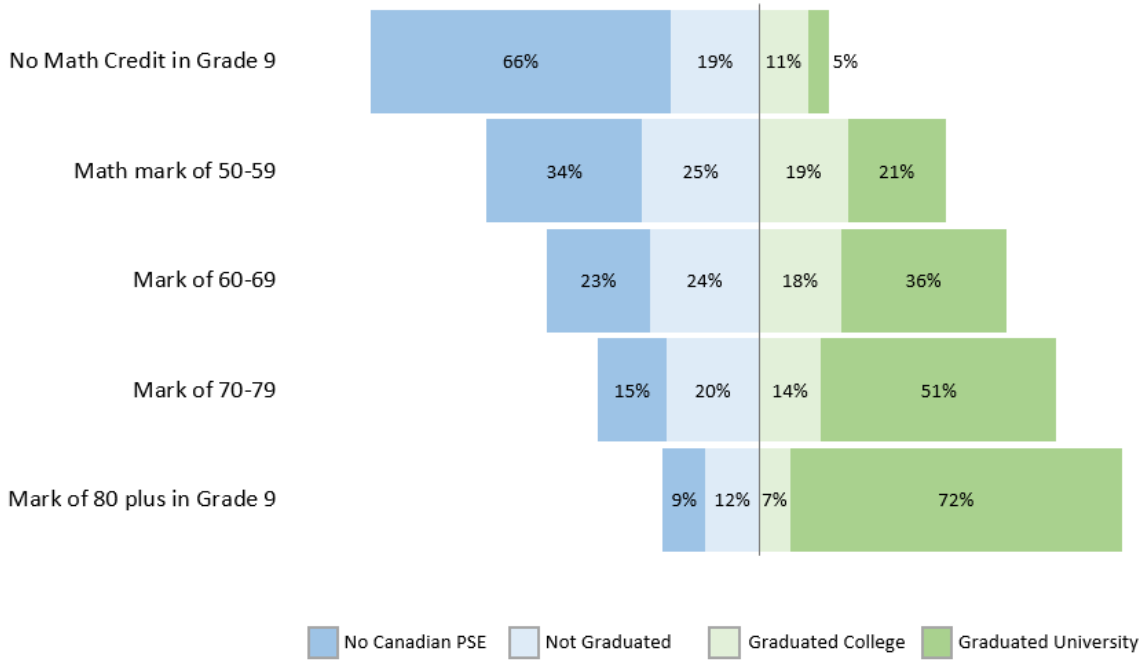
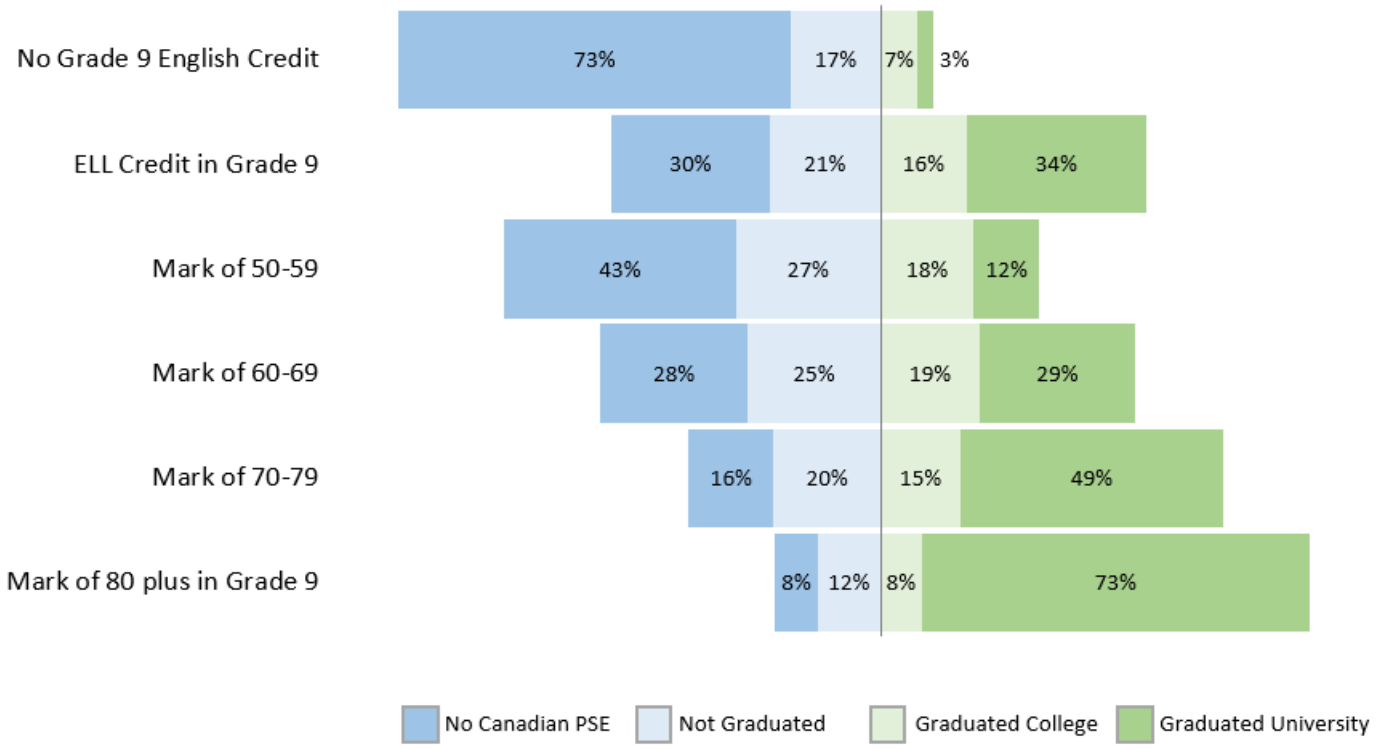


Table 14: Grade 9 Achievement in English

Grade 9 Achievement in English	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
No Grade 9 English Credit	73.4%	16.8%	7.0%	2.8%	100.0%	3990
ELL Credit in Grade 9	29.5%	20.8%	16.1%	33.6%	100.0%	2980
Mark of 50-59	43.3%	27.1%	17.5%	12.2%	100.0%	6980
Mark of 60-69	27.5%	24.9%	18.6%	29.0%	100.0%	9420
Mark of 70-79	15.9%	20.0%	15.0%	49.1%	100.0%	13400
Mark of 80 plus in Grade 9	7.9%	11.8%	7.7%	72.6%	100.0%	13690



6e. Grade 9 Average Mark

In general, the higher the Grade 9 average mark, the higher the level of postsecondary education. Thus, students who finished university had an average Grade 9 mark of 78 (B+) while students who did not apply to postsecondary at all had an average Grade 9 mark of 57 (D+).

Table 15: Mean Grade 9 Mark of Graduation Categories

Graduation Categories	Mean Grade 9 Mark
No postsecondary in Canada	56.7
Postsecondary but did not graduate	66.73
Graduated college	67.75
Graduated university	78.81
Total	69.45

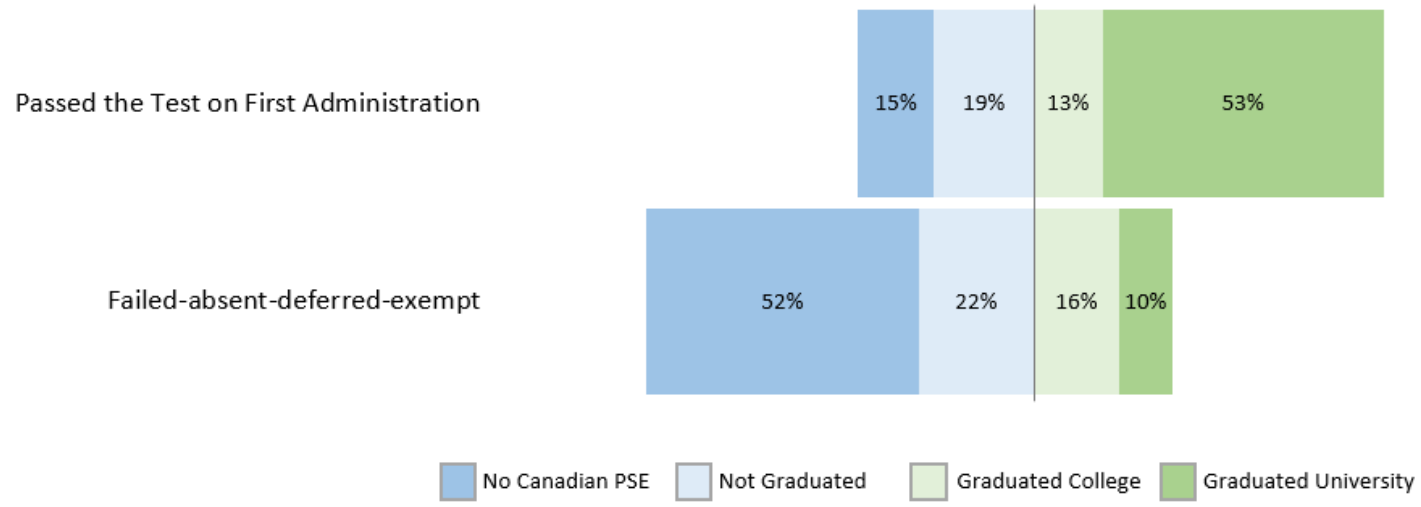
6f. The Grade 10 Provincial Literacy Test (OSSLT)

Students in their second year of secondary school (Grade 10) are required to complete a literacy requirement, primarily through the administration of the Ontario Secondary School Literacy Test (OSSLT). Earlier research found that the vast majority of students who passed the OSSLT during the first administration in Grade 10 (referred to as first-time eligible) will graduate from secondary school within five years (Brown, 2010, p. 31). Likewise, as seen in Table 16, those students are most likely to graduate with a postsecondary credential, compared to students who did not pass the test (that is, they failed the test, were deferred, absent, or exempted).[9]

[9] Since the first administration of the OSSLT as a graduation requirement in 2001, the OSSLT structure has been modified. For example, at one point, there were two different types of absences, which was changed to one. Because of this, OSSLT results are presented as a dichotomous variable: out of all students who were first-time eligible, students are categorized as passing the test, or

Table 16: Grade 10 Literacy Test (OSSLT: First-time Eligible Only)

Grade 10 Literacy Test Results (OSSLT)	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Passed the Test on First Administration	14.6%	18.9%	13.1%	53.4%	100.0%	36180
Failed-absent-deferred-exempt	51.9%	21.8%	16.3%	10.0%	100.0%	10040



not. There are a number of missing students, in part because the cohorts and the OSSLT started before the provincial implementation of a common provincial student number (OEN), as well, students transferred out of the TDSB after Grade 9; finally, especially in earlier years, the definition of first-time eligible (Grade 10) was not completely congruent with the second year of secondary school as measured chronologically through cohort studies. This third issue has been almost entirely resolved in recent years through the development in Ontario SIS systems of a 'cohort' variable to clearly measure years in school.

6g. Special Education Needs

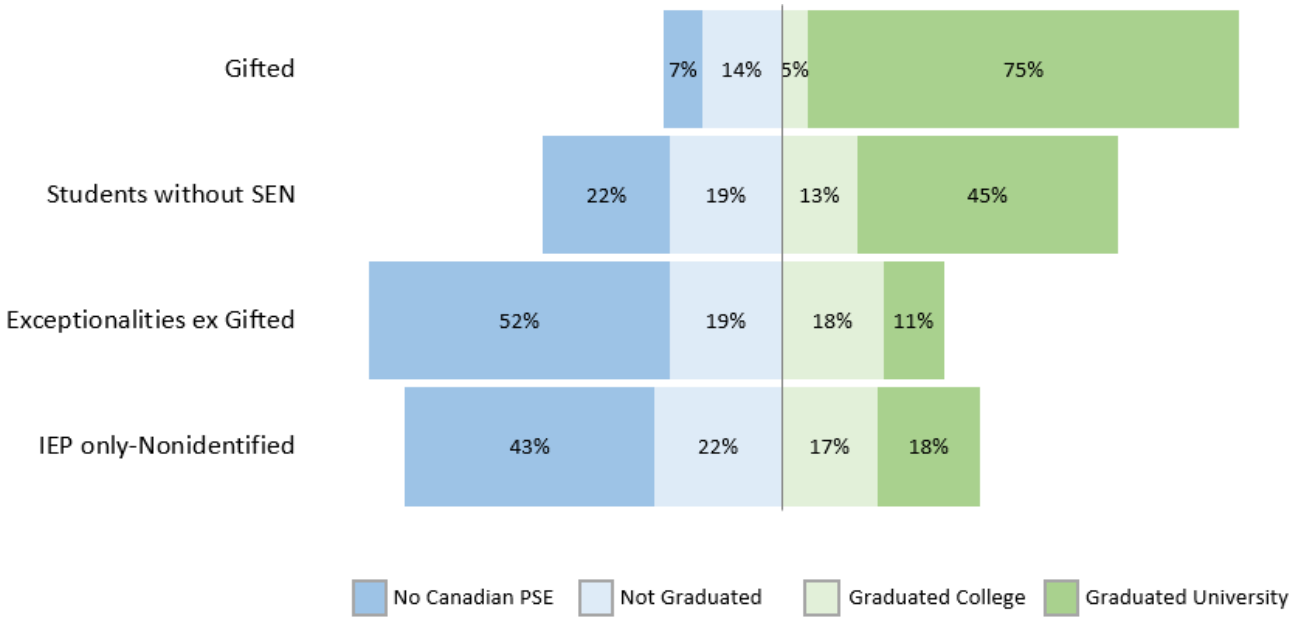
All students were divided into four categories: those with a Gifted exceptionality (in Ontario, students with a Gifted exceptionality are considered to be students with Special Education Needs); those without Special Education Needs; those with an Exceptionality (excluding Gifted); and those without an exceptionality but with an Individual Education Plan (IEP). The patterns of TDSB's Special Education Needs students are complex. In the TDSB 2010 study, it was found that the majority of students with Special Education Needs graduated from secondary school, but most did not go to postsecondary (Brown, 2010).

Table 17 shows the postsecondary patterns of students with Special Education Needs. Around 80% of those with a Gifted exceptionality graduated from a Canadian postsecondary institution, generally from university (this pattern is similar to students with an 'A' in Grade 9 English, and those with an 'A' in Grade 9 Mathematics, in Tables 13 and 14). Perhaps not surprisingly, students without Special Education Needs had postsecondary outcomes slightly higher than that of the overall TDSB population.

Slightly over half of students with Special Education Needs (excluding Gifted) entered a Canadian postsecondary institution- a slightly higher proportion than would have been predicted from the original 2010 TDSB study.[10] Somewhat over a quarter of students with an exceptionality (excluding Gifted) graduated with a postsecondary credential while around a third of students with an IEP only (referred as 'Nonidentified' by the Ministry of Education) graduated with a postsecondary credential.

Table 17: Special Education Needs Status

Special Education Needs Status	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Gifted	6.5%	13.9%	4.6%	75.0%	100.0%	1080
Students without SEN	22.1%	19.4%	13.2%	45.3%	100.0%	43190
Exceptionalities ex Gifted	52.4%	19.4%	17.7%	10.5%	100.0%	3610
IEP only-Nonidentified	43.4%	22.1%	16.7%	17.8%	100.0%	2580



[10] Presumably some students with Special Education Needs entered postsecondary after the five-year TDSB study.

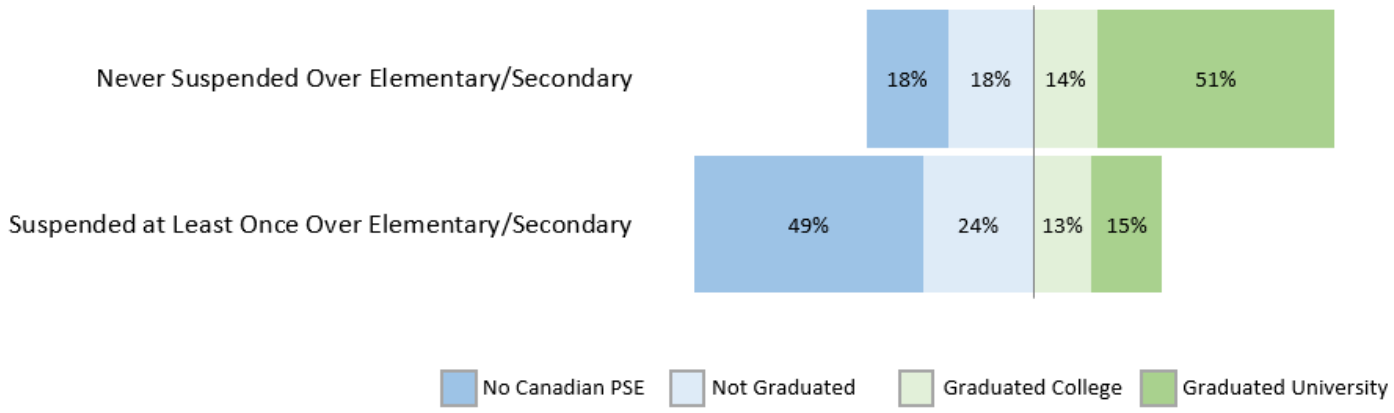
6h. Suspensions over Public School (Elementary/Secondary)

The strong relationship between suspensions over public school (elementary/secondary) and postsecondary access was first reported in Brown and Parekh, 2013. [11] Students who were suspended had a much lower chance of accessing and graduating postsecondary (Brown and Parekh, 2013; see also Brown et al, 2020).

Likewise, as seen in Table 18, slightly under a quarter of students (24%) had been suspended at some point over their time in public school. Students who had been suspended were over twice as likely not to transition into postsecondary (49% compared to 18% of those not suspended) and were a third as likely to finish university (15% compared to 50% of those not suspended).

Table 18: Suspensions Over Public School

Suspensions Over Public School	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Never Suspended Over Elementary/Secondary	17.5%	18.2%	13.8%	50.5%	100.0%	38420
Suspended at Least Once Over Elementary/Secondary	49.0%	23.5%	12.5%	15.0%	100.0%	12010



[11] Ontario suspensions are generally reported on an annual basis. With TDSB cumulative suspensions, students are categorized as 'suspended' if they were suspended at least once over their years in the TDSB elementary and secondary systems. See Brown and Parekh, 2013.

6i. Highest Mathematics and English Secondary School Course Completed

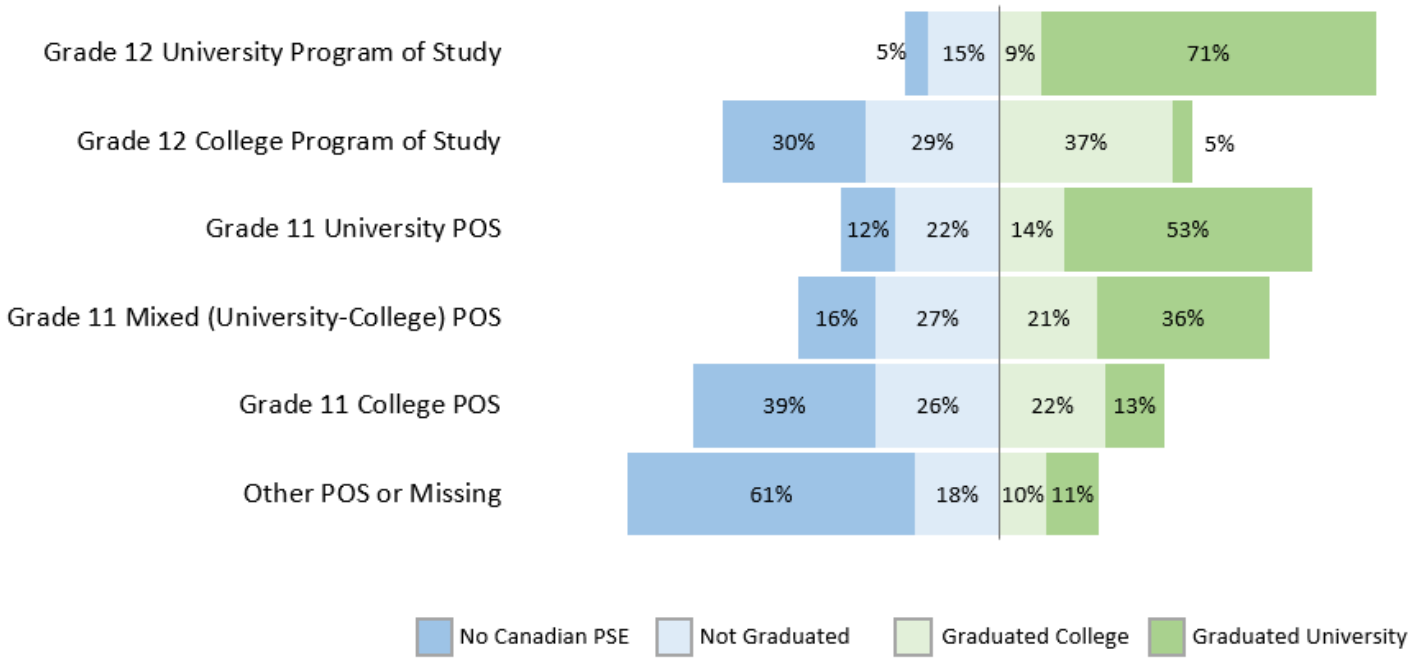
The Ontario OSS curriculum has Grade 11-12 university, college and 'mixed' university/college pathways to postsecondary. However, as was seen with Grade 9 Program of Study, actual pathways are noticeably different from the theoretical pathways. An earlier examination of eight TDSB cohorts[12] cohort found a close relationship of completion in Grade 12 'U' courses and access to *both* university and college. "Regardless of formal high school graduation requirements, completing Grade 12 'U' (University) courses are the general course requirement leading to post-secondary. When we looked at the 2005 to 2012 Grade 9 cohorts, we found that all university-bound students, and two thirds of college-bound students, completed at least one Grade 12 'U' course by the end of secondary." (Brown, Parekh and Gallagher-Mackay, 2019, p. 5).

Likewise, Grade 12 completion patterns in English and Mathematics have a very strong relationship to postsecondary completion, as seen in Tables 19 (Mathematics) and 20 (English). The most frequent Mathematics course completed was Grade 12 U (by 43% of the cohort) and the vast majority of these students graduated postsecondary (71% university and 9% college). At the same time, most students who completed a Grade 11 U course graduated (53% university and 14% college) as well as those who completed a Grade 11 Mixed (College-University) course (36% university and 21% college). In contrast, the outcome for those completing College courses was uncertain: less than half who completed a Grade 12 College course in Math completed postsecondary (4% university and 37% college) similar to Grade 11 College (13% university and 22% college).

Table 19: Top Mathematics Course Completed

Top Mathematics Course Completed	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Grade 12 University Program of Study	4.7%	15.4%	8.6%	71.3%	100.0%	21900
Grade 12 College Program of Study	30.2%	28.7%	36.5%	4.5%	100.0%	3340
Grade 11 University POS	11.6%	22.2%	13.6%	52.6%	100.0%	3610
Grade 11 Mixed (University-College) POS	16.4%	26.5%	20.7%	36.4%	100.0%	4150
Grade 11 College POS	38.7%	26.4%	22.3%	12.6%	100.0%	5070
Other POS or Missing	60.9%	18.1%	9.8%	11.3%	100.0%	12390

[12] That study focused on students who started in Grade 9 between 2005 and 2012, which includes the 2005 and 2006 cohorts examined in this current analysis, but does not include the 2004 cohort. See Brown, Parekh and Gallagher-Mackay, 2019.

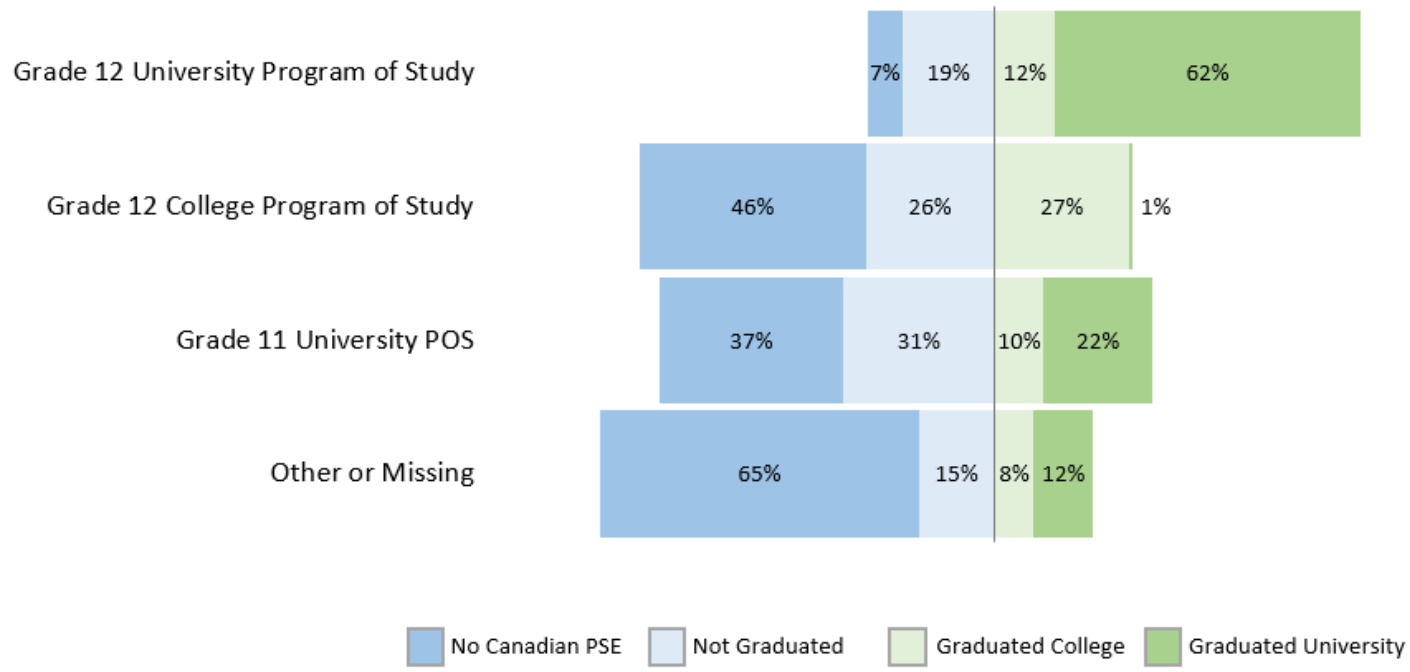


Completion of English courses was more compact. Almost two thirds of students in the cohorts (63%) completed a Grade 12 U course in English. Because almost three quarters of those Grade 12 U English students completed a postsecondary credential, they accounted for almost all university completions (92%) and the majority of college completions (58%).

Grade 12 course patterns demonstrate how the Ontario streaming process that starts with Grade 9 Program of Study then connects to Grade 12 courses, and hence through postsecondary.

Table 20: Top English Course Completed

Top English Course Completed	No postsecondary in Canada	Postsecondary but did not graduate	Graduated college	Graduated university	Total (%)	Total (N)
Grade 12 University Program of Study	7.1%	18.7%	12.3%	61.9%	100.0%	31700
Grade 12 College Program of Study	45.8%	26.2%	27.3%	0.7%	100.0%	7030
Grade 11 University POS	37.3%	30.7%	10.0%	22.0%	100.0%	1500
Other or Missing	64.6%	15.4%	8.0%	12.0%	100.0%	10220


Grade 12 University Program of Study
7%
19%
12%
62%
Grade 12 College Program of Study
46%
26%
27%
1%
Grade 11 University POS
37%
31%
10%
22%
Other or Missing
65%
15%
8%
12%
No Canadian PSE
Not Graduated
Graduated College
Graduated University

7. *The 'Grey Area' of Postsecondary Application and Enrolment*

According to PSIS documentation, enrolments are based on students enrolled in postsecondary institutions "at the time of the fall snapshot date- a single date chosen by the institution that falls between September 30 and December 1. Therefore students who are not enrolled during this time period are excluded from the enrolment counts for the snapshot. This has a greater impact on colleges as they have a continuous intake of students and often shorter programs" (Postsecondary Student Information System (PSIS) Research Data Centre User Guide, pp. 8-9).

For a student to be categorized as a 'Non-completer', who started postsecondary but did not graduate by the end of the PSIS study (2017), we used first record of where the snapshot was equal to 1, that is, the student record was counted as part of the snapshot. This meant that some TDSB students had progressed into postsecondary enough that their information was entered into the PSIS system, but they did not attend long enough to be included into the official PSIS enrolment criteria. Therefore, rather than 'Non-completers', they are categorized here as 'Non-attenders' – that is, officially not entered into postsecondary.

These students represent part of a difficult to document 'grey area' of postsecondary enrolment. That is, there are students who make some sort of initial effort to register into postsecondary: they partially fill out a university or college application process (through OUAC and/or OCAS); apply to postsecondary; confirm an offer of admission; and even attend initial classes, but go no further into postsecondary education. And while many will re-apply or re-enrol at a later point in time, others will not.

How many students are part of this 'grey area' cannot be properly measured, but it is probably a substantial number. For example, a parallel study of students in the TDSB Grade 9 cohorts from 2003-2007 entering York University (thus, including students in this study) found that around 2% of students who went directly from the TDSB to York had registered for enrolment at York but did not complete their first semester. That is, they had a valid enrolment begin date, but had no record of a sessional GPA or credits, indicating that they withdrew before passing or failing any initial courses (Brown, 2021).

There are also many students who make an effort to enrol in postsecondary but who do not successfully conclude the application process. For example, in Table 3 there were over 4,500 students who had put forward at least one application to an Ontario college and university, but who had not confirmed a postsecondary application over the duration of the TDSB cohort studies (that is, by the end of Year 5 secondary)[13]. It is reassuring to know that over three quarters of those applicants did end up attending postsecondary in Canada. Yet it is also disconcerting to know that more than a fifth of these applicants never attended postsecondary (by 2017).

In other words, the quarter of TDSB students in this report who did not *attend* postsecondary includes many students who had enough interest in postsecondary that they *applied*. Yet these applicants, despite their interest, were either unsuccessful in their application; or were successful but unable to take up an offer of admission; or they even showed up on campus, but not long enough to be part of the official enrolment count. This important subgroup deserves greater study, despite the challenges in quantification.

[13] That is, "Apply to postsecondary but no confirmation record" in Table 3.

OVERALL CONCLUSIONS

1. ACHIEVEMENT PATTERNS: SECONDARY AND POSTSECONDARY SCHOOL

The general picture of postsecondary attainment of the 2004-2006 cohorts reflects the general picture of high school graduation and postsecondary pathways, as seen in the TDSB five-year analysis of students found in a study of the Fall 2004 cohort over a decade ago (Brown, 2010). That is, in the original 2010 TDSB cohort study, the patterns of who went to postsecondary reflected the patterns of high school graduation. We have found that the patterns of *postsecondary completion* reflect the general patterns of *high school graduation* and *direct postsecondary entry*.

2. TIME TAKEN TO COMPLETE HIGH SCHOOL IS IMPORTANT

For this study, a detailed high school graduation variable was calculated from TDSB records, showing if students graduated from the TDSB within four, five, or six plus years of starting Grade 9. The most frequent pathway was four-year secondary school completion. Almost all of those students entered postsecondary and most graduated from university. Students who competed high school in five years were less likely to complete postsecondary (although the majority who started postsecondary did complete a credential). Students who took longer than five years, or those with no high school graduation record, usually did not end up with a postsecondary credential. *Thus, time taken to finish high school appears amongst the strongest predictors of both postsecondary access, and postsecondary graduation*.

3. POSTSECONDARY ACCESS PATTERNS AND POSTSECONDARY COMPLETION

The TDSB has a postsecondary access variable based on applications information provided by the Ontario university and colleges application centres. There are a number of differences between what is included in this TDSB postsecondary *confirmations* variable, and what is included in our postsecondary *completions* variable. The TDSB confirmation variable does not include confirmations outside Ontario; nor does it include students who entered postsecondary after Year 5; nor does it include the students who transferred outside the TDSB before Grade 12. As well, it looks only at who confirms an offer of postsecondary, not who completes postsecondary. Nonetheless, outcomes of this TDSB variable based on Ontario applications are quite closely related to the postsecondary completion patterns documented in this report. This is important given that currently, Ontario school boards have limited information on postsecondary attainment, and so the validity of information derived from Ontario applications may be very useful for future board planning.

4. THE CONSISTENCY OF THE GENDER GAP

There is concern around the increasing gender gap of North American postsecondary achievement (e.g. Edsall, 2021). Although this analysis is a baseline rather than a trend analysis, the stark gender differences in university completion here provides food for thought. TDSB research has been showing pronounced gender differences for some decades now, from kindergarten school readiness to postsecondary pathways. It should not be surprising that these trends continue to final postsecondary attainment. Furthermore, the intersectionality of gender with other variables associated with lower achievement (e.g. Special Education Needs, Grade 9 streaming) have been clearly documented.

5. NEIGHBOURHOOD INCOME PATTERNS

Students living in lower-income are less likely to enter postsecondary study, compared to those in high income neighbourhoods. However, differences may not be as pronounced once students enter postsecondary- a trend worth further investigation.[14]

[14] This has similarities to the earlier study of TDSB students attending U of T (see Brown, Davies and Chakraborty, 2019).

6. *THE GRADUATION INFORMATION HERE IS BY NO MEANS THE FULL PICTURE*

The initial years of PSIS had higher missing information on college completion, and consequently we know that the college completion rate is going to be somewhat undercounted. As well, we know from other TDSB research that it takes up to ten years for students to have a full cohort completion rate for postsecondary; we will need to go back and examine these and other cohorts at a later point in time.

But perhaps more importantly, this study has focused on the direct pathway to postsecondary, whereas adult pathways add much more to the picture. While the vast majority of students in the TDSB made the direct transition to university, we know that more TDSB students apply to college than to university. However, they generally do this as adult students. In fact, most Ontario college applicant are adults, and this trend has been increasing in recent years (Colleges Ontario, 2020).

As well, there is a whole infrastructure of both private and public technical colleges that are not included in the official PSIS data.

It is safe to say that this study has provide a comprehensive look at the initial, direct pathway to postsecondary. This study also includes those who take some time between their secondary and postsecondary schooling. Yet an even longer study may be necessary to a more complete picture, to include students who transitioned into the workforce for many years, before decided to enter or re-enter postsecondary as adult students.

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