



Research Report

**2006 STUDENT CENSUS: LINKING
DEMOGRAPHIC DATA WITH STUDENT
ACHIEVEMENT – EXECUTIVE SUMMARY**

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07/08-06

April 2008

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**Issued by the Organizational Development Department,
Research and Information Services**

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Achievement – Executive Summary

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EXECUTIVE SUMMARY

Linking Demographic Data with Student Achievement

Using data from the Toronto District School Board's (TDSB) Student Census and Student Information System (SIS), this study examines the academic achievement patterns of the TDSB students in Grades 7 to 10 from various demographic characteristics and family background. While the student academic attainment can be evaluated with different measures, this study concentrates on academic attainment based on school marks in major subjects for the senior elementary grades (Grades 7 and 8), Grade 9 credit accumulation/major subject attainment, and EQAO Grade 10 Ontario Secondary School Literacy Test (OSSLT) results for the secondary panel. Key findings of this study are highlighted as follows:

Student Demographic Characteristics and Student Achievement

Grades 7 and 8

Gender: In all four subjects, the proportion of female students achieving at or above the provincial standard (Levels 3 and 4) were higher than those of male students, but the differences were relatively lower in Mathematics compared to Reading, Writing, and Science.

Student's Region of Birth: Higher proportions of students born in Eastern Asia, South Asia, Southeast Asia, US, Canada, and Europe tend to achieve or exceed the provincial standard in all four subjects. Students born in the English-speaking Caribbean, Central and South America, Eastern Africa, Western Africa, and Western Asia are comparatively less likely to achieve similar grades than students born in any other region.

Student's Racial Background: East Asian students have the highest proportion achieving at or above the provincial standard in Reading and Writing, followed by White, Southeast Asian, South Asian, Mixed, Middle Eastern, Latin, and Black students. The student achievement pattern is somewhat similar for Mathematics and Science with only slight proportionate differences.

Student's Language: Students' academic achievement varies across language groups. For example, Romanian, Korean, Hindi, Chinese, Bengali, and Serbian are among those that have the highest proportion of students achieving at or above the provincial standard in Reading and Writing. The student achievement pattern is somewhat similar for Mathematics and Science with only slight proportionate differences.

Grades 9 and 10

Gender: Male students in Grade 9 and 10 have clearly lower performance in all secondary indicators: Grade 9 Credit Accumulation, Grade 9 Science, Geography, Mathematics, English, and the Grade 10 Literacy Test.

Age of Student: Grade 9 and 10 students who are older than age-appropriate are much more at-risk than age-appropriate students (who are the majority of Grade 9 and 10 students).

Student's Region of Birth: Grade 9 patterns are similar to those seen in earlier research. Students born in the English-speaking Caribbean, Central and South America/Mexico, and Eastern Africa tend to be more highly at-risk than the average student; students born in Eastern Europe, South Asia, and Eastern Asia tend to be less highly at-risk than the average student; students born in Canada tend to have average at-risk levels. OSSLT patterns are not as clear in part due to recent immigration and the proportion of ESL students from some regions.

Student's Racial Background: Grade 9 at-risk students who describe themselves as East Asian, South Asian, Southeast Asian, and White have at-risk rates below the TDSB total, while Middle Eastern and Mixed students have at-risk rates slightly above the board total; those describing themselves as Black or Latin are more likely to be at-risk. A similar distribution is seen in the cohort achievement in the four mandatory subjects. With the Grade 10 OSSLT, the pattern is less noticeable in part due to ESL and recent immigration; still, self-identified Black students have the lowest OSSLT pass rate.

Student's Language: In general, students speaking English (the largest group, accounting for about half the students) have achievement levels somewhat below the average. Students speaking Somali, Spanish, and Dari have much higher at-risk rates and lower achievement. Other language groups (Portuguese, Persian-Farsi, and Greek) have lower achievement in some subjects, yet performance in other indicators is not as problematic. High achievement by student language is somewhat more difficult to put into a consistent pattern. Students speaking Bengali, Chinese, Gujarati, Korean, Russian, Tamil, Hindi, Punjabi, and Vietnamese have higher Grade 9 credit accumulation and usually (but not always) have higher achievement in Science, Geography, and Math. The pattern is not as consistent for English and Grade 10 OSSLT Literacy, in part because of high recent immigration and ESL levels of some language groups.

Student's Sexual Orientation: There are three main categories of responses: heterosexual, Lesbian/Gay/Bisexual/Transgender/Queer (LGBTQ), and Two-spirited, and those 'unsure'. Caution needs to be taken with the 'unsure' category, since it appears that some answered this because they were unclear about what this terminology means, while others answered this because they themselves were questioning their sexual orientation. In the Grade 9 cohort, heterosexual students are somewhat less at-

risk than LGBTQ students and are somewhat more likely to be at the provincial average (70% or more) in the four mandatory Grade 9 subjects. However, there is no real difference in Grade 10 OSSLT results. This is a case where following the Grade 9 students over their secondary careers will provide a more complete picture.

Family Background and Student Achievement

Grades 7 and 8

Parents' Place of Birth: Only slight variation is found in student achievement depending on their parents' place of birth. In Reading and Writing, just under three quarters of students who had Canadian-born parents achieved or exceeded the provincial standard, whereas only two thirds of the students whose parents were born outside Canada achieve or exceed the provincial standard. The profile of student achievement in Mathematics and Science is found to be somewhat similar for students who had Canadian-born parents and students whose parents were born outside Canada.

Parental Presence at Home: Students with both parents present at home are more likely to achieve or exceed the provincial standard when compared to those students who are living with one parent. Most students with two parents achieve or exceed the provincial standard in both Reading and Writing. About half of the students living with single parents (either with father or mother only) achieve or exceed the provincial standard in Reading, Writing, Mathematics, and Science.

Parents' Educational Background: Students with at least one postsecondary-educated parent perform better than students whose parents were educated to the high school level. The majority of students whose parents attended university achieves or exceeds the provincial standard in Reading, Writing, Mathematics, and Science.

Family Socio-Economic Status (SES): Students having parents of high SES are much more likely to achieve and exceed the provincial standard in all four subjects compared to those from low SES background. More than three quarters of the students whose parents are professionals tend to achieve or exceed the provincial standard in Reading, Writing, Mathematics, and Science compared to just over half of the students whose parents work in unskilled positions or those with no income.

Grades 9 and 10

Parents' Place of Birth: Just as there is little difference in student achievement between those born in Canada and those born outside Canada, parent place of birth is likewise not strongly related to student achievement. The next step will be looking in more detail at differences between parent's place of birth.

Parental Presence at Home: Students living with both parents have lower at-risk rates, higher subject achievement, and higher OSSLT pass rates, than those living in other family situations.

Parents' Educational Background: Students with university-educated parents are much more likely than those with college or high school-educated parents to be at lower-risk, be at the provincial standard (70% or higher) in the four Grade 9 subject areas, and to have passed the OSSLT.

Family Socio-Economic Status (SES): There is the strong relationship of family socio-economic status to Grade 9-10 student achievement seen in previous TDSB research. The proportion of Grade 9 cohort students with Professional parents/caregivers is approximately five times that of students with parents from Non-remunerative backgrounds; those from Professional backgrounds are much more likely to be meeting or exceeding the provincial standard in all four subjects, and are more likely to have passed the Grade 10 OSSLT.

Student Program of Study

For these Grade 9 and 10 students as with previous studies, we look at the majority of courses taken by the student in each program of study. The strong relationship seen in earlier studies is likewise seen in TDSB 2006-7 results: students taking a majority of courses in the Academic level are much less likely to be at risk, more likely to be at the provincial standard in the four Grade 9 subject areas, and more likely to pass the OSSLT, than students taking a majority of courses in Applied and Locally-developed/Essentials.

Concluding Remarks

The more recent history of TDSB has found a gradual but important increase in both elementary and secondary school achievement. That being said, this analysis finds that there are clear differences among groups of students. For example, male students, self-described Black students, students born in the English-speaking Caribbean, those speaking Spanish and Somali, students from more challenged socio-economic circumstances, and those living with one parent are more likely to have academic challenge in their first years of high school – findings seen in earlier TDSB research studies, some going back decades. Similar patterns are seen with elementary panel results, in looking at key Grade 7 and 8 Report Card results for 2006-7. These elementary results will serve as a baseline for future studies of senior

elementary students. It is clear, that for a more precise examination of how these students are doing, we will need to follow them over their secondary school careers.

It should be noted that the tables and graphs show relationships and patterns, but they do not provide cause-and-effect relationships; nor is there a judgment of which of these variables are more important than others. The next steps in the research process will involve the examination of these variables using a number of statistical models.