## Research Report

## 2006 STUDENT CENSUS: <br> CORRELATIONS OF SCHOOL <br> EXPERIENCE WITH STUDENT <br> DEMOGRAPHICS AND ACHIEVEMENT

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09/10- 09
December 2009

2006 Student Census: Correlations of School Experiences with Student Demographics and Achievement

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## EXECUTIVE SUMMARY

The Toronto District School Board (TDSB) Student Census, conducted with the Grade 7-12 students in Fall 2006, has provided the Board an unique opportunity to collect student demographic and school experience data. Responses to the original survey questions related to school experiences have been statistically combined into six major categories based on their correlations: overall school environment, class participation, relationships with other students, relationships with school adults, school safety, and inclusive school experience. Students' school experiences in these six areas have been closely examined by student grade, program of study in Grade 9 and 10, student gender, racial background, birth place, parent presence at home, parent education, and family socio-economic status (SES). Grade 7-8 students' achievement results in report card Reading, Writing, Mathematics, and Science, and Grade 910 students' final course marks in English and Mathematics, accumulated credits by the end of Grades 9 and 10, and their outcomes on the Ontario Secondary School Literacy Test (OSSLT), were linked to students' school experiences to investigate the impacts of students' school experiences on their academic achievement. In addition, Grade 7-10 students' school attendance was examined by their school experiences.

Although the majority of Grade 7-12 students indicated they feel comfortable with the overall school environment and with participating in class, the overall school satisfaction varied by student grades: the lower the grade, the more students enjoy school, participate in class and feel comfortable with school adults. However, student grade or age is not a factor by which students define their relationships with other students in school, or view school as an inclusive place to learn. Although more than $80 \%$ of students, regardless of their grade levels, indicated they feel safe at school, a notable proportion of students (4-6\%) reported they rarely or never feel safe in schools.

There are more Grade 9-10 students in the Academic program feeling comfortable with the overall school environment and with participating in class than in the Applied or Locallydeveloped programs. The proportion of school-disengaged students in Applied and Locallydeveloped programs are double or more than students in the Academic program. Students in the Academic program had higher proportion of students feeling comfortable with other students and with school adults, and feeling safe at school than students in the Applied or Locallydeveloped programs.

While the majority of students feel comfortable with their overall school environment, female students had a higher proportion (5-6\% higher) than male students. In terms of class participation, more male students (7-8\% higher than female students) indicated that they participate in class all the time or often.

South Asian students had the highest proportion indicating they enjoy school, followed by Middle Eastern students. Black, Latin, and Mixed students had the lowest proportions, with East Asian, White, and Southeast Asian students in between. White students had the highest proportion feeling comfortable participating in class, followed by Middle Eastern, and South Asian students. About half of Southeast Asian, East Asian, and Latin students indicated they participate in class all the time or often. The majority of students indicated they feel safe at school all the time or often, although Southeast Asian and Black students had slightly lower proportions feeling safe at school than other racial groups. About one third of East Asian, Southeast Asian, and White students in Grades 7-8 indicated they view school as an inclusive place to learn. For the secondary panel, Latin (34\%), East Asian (36\%), and White (37\%) students had the lowest proportions indicating they view school as an inclusive place to learn.

Approximately 5\% more students born outside Canada reported they feel comfortable with the overall school environment in comparison to students born in Canada. In addition, 5\% more students in Grades 7-8 and 11\% more students in Grades 9-12 viewed school as an inclusive place to learn.

Sixty-nine percent (69\%) of heterosexual Grade 9-12 students feel comfortable with the overall school environment, compared with 52\% of Lesbian/Gay/Bisexual/Transgender/Queer (LGBTQ) students. There are also $12 \%$ more LGBTQ students indicating they rarely or never feel comfortable with school. In terms of relationships with other students and school adults, 17\% more heterosexual students indicated they feel comfortable all the time or often than LGBTQ students. Seventy-one percent (71\%) of LGBTQ students reported they feel safe at school all the time or often, which is $12 \%$ lower than heterosexual students.

Students living with both parents had a higher proportion feeling comfortable with the overall school environment than students living with a single parent. Students living with both parents also tend to participate in class more and have better relationships with other students and school adults than students living with a single parent or with others.

Parent education has less impact on students' satisfaction with overall school environment than on students' class participation: the higher the parent education, the more students indicated they feel comfortable participating in class all the time or often. Parent education also seems not to have much influence on students' relationships with other students or school adults, or on their perceptions of school safety and viewing school as inclusive place to learn.

Family socio-economic status (SES) has less influence on students' overall school satisfaction than on students' class participation: more students from families with higher SES feel comfortable participating in class all the time or often than students from families with lower SES. Family SES also plays some role on students' relationships with other students, but has no impact on students' relationships with school adults.

There are direct correlations between Grade 7-8 students' perception of overall school environment and their academic achievement in all four subjects of Reading, Writing, Mathematics, and Science: the more students enjoy school, the higher the proportion of students who meet the provincial standard (Level 3 or above). For students who indicated they rarely or never feel comfortable with the overall school environment, significant proportions ( $18 \%-30 \%$ ) of them appeared to be at-risk (i.e., achieved Level 1 or below in the four subject areas). Similar patterns exist in English and Mathematics course marks for Grade 9-10 students. Also, students who enjoy school tend to have a much better chance of accumulating enough credits and of passing the Ontario Secondary School Literacy Test (OSSLT) than students not enjoying school. In addition, students who feel comfortable with the overall school environment tend to attend school more than other students.

Grade 7-8 students who feel comfortable participating in class tend to have higher achievement results in the four subject areas than students not feeling comfortable participating in class. For students who indicated they rarely or never feel comfortable participating in class, about half of them achieved the provincial standards, and they represented a much higher proportion of students achieving Level 1 or below (16\%-26\%). Similar patterns have been observed in Grades 9-10 English and Mathematics course marks, credit accumulation, and in the provincial literacy test.

For Grade 7-8 students who get along well with other students, about two thirds of them achieved Level 3 or 4 in the four subject areas, compared with about half of the students who reported they rarely or never feel comfortable with other students. The achievement gaps in

English and Mathematics are $17 \%$ and $12 \%$ in Levels 3 and 4 between Grade 9-10 students who feel comfortable with other students all the time or often and students who rarely or never feel comfortable. More students who rarely or never feel comfortable with other students were highly at-risk or failed the provincial literacy test for the first time.

Less than half of the students not feeling comfortable with school adults achieved Level 3 or 4 in report card marks for Reading, Writing, Mathematics, or Science, while about two thirds of the students who always feel comfortable had achieved at or above the provincial standards. Similar or wider achievement gaps existed for Grade 9-10 students: 25\% and 23\% more students achieved Level 3 or 4 in English and Mathematics courses for students feeling comfortable with school adults than students rarely or never feeling comfortable with school adults. In terms of credit accumulation, nearly one third of students not feeling comfortable with school adults were highly at-risk, and $28 \%$ of them failed the OSSLT for the first time.

About 4\% of Grade 7-8 students indicated they rarely or never feel safe at school. For these students, less than half had achieved Level 3 or 4, and 19-30\% had achieved Level 1 or below in Reading, Writing, Mathematics, or Science. For students feeling safe at school all the time or often, between $64 \%-68 \%$ of them achieve Level 3 or 4 in the four subject areas. For Grade 9-10 students who indicated they rarely or never feel safe at school, only $41 \%$ had achieved a mark of 70 or higher (Level 3 and 4) in English, while 26\% had a mark below 60 (Level 1 or below). A significant proportion of these students were highly at-risk (25\%) in credit accumulation, or failed the literacy test (28\%).

Students' inclusive school experience had little or no impact on student achievement or school attendance.

In summary, this report drew on the recommendations of two previous TDSB research reports (Yau \& O'Reilly, 2007; Brown \& Sinay, 2008) which called for further investigation of student demographic background and student achievement data. The findings presented in this report provide an overall global snapshot of student perceptions of their school experiences, as collected from a wide demographic range of TDSB students. Such detailed information deepens the collective understanding of the TDSB student population and contributes to its commitment to the principle of equity, so that ultimately, all students do indeed learn and grow to their full potential, in environments that welcome differences and are free from discrimination

## INTRODUCTION

The Toronto District School Board (TDSB) is the largest school board in Canada, serving more than 265,000 students in 474 elementary and 117 secondary schools in the 2007-2008 school year in the City of Toronto, one of the world's most diverse cities. The TDSB school communities reflect this diversity with a wide array of racial, ethnic, and cultural groups. The publicly-funded school board is committed to the principles of equity to enable all students to learn and grow to their full potential, in environments that welcome differences and are free from discrimination.

The TDSB's recent research reports, 2006 Student Census, Grades 7-12: System Overview (Yau \& O'Reilly, 2007) and 2006 Student Census: Linking Demographic Data With Student Achievement (Brown \& Sinay, 2008), used data from the 2006 Grade 7-12 Student Census surveys (referred as 2006 Student Census hereafter) and the 2006-2007 student achievement results in elementary report card, secondary course marks, credit accumulation, and the Ontario Secondary School Literacy Test (OSSLT) to investigate the TDSB's Grade 7-12 student demographic characteristics, student experiences in school and outside of school (Yau \& O'Reilly, 2007), and the correlations of these students' demographic backgrounds with their academic performance (Brown \& Sinay, 2008). Both reports recommended to further examine students' school experiences by their demographic backgrounds, and to investigate the correlations of their school experiences with academic achievement. This report, using the same data mentioned above, fulfills this purpose.

## METHODOLOGY

The TDSB's 2006 Student Census employed a matrix-sampling method in which two forms (Forms A and B) were designed: the section on demographics for both forms was identical, but each form had its own set of contextual questions with a few common items. Every second student was randomly assigned to complete one of the two forms. In this way, alternate students within the same class would complete Form A, while the other half would complete Form B (Yau \& O'Reilly, 2007). As the information covered by the surveys is very comprehensive, for example, there are 23 items to ask about students' experiences regarding inclusive school environment from Questions 16-19 in the Grade 7-8 Form A, the analysis would have to be greatly extended by examining each item with respect to different student demographic backgrounds and by linking student survey response in each item to student achievement in Reading, Writing, Mathematics, Science, credit accumulation, and the provincial
literacy test. Therefore, survey items related to major themes have been statistically combined based on their correlations, using the statistical procedure of Factor Analysis. For example, there are seven survey items (Question 19 in the Grade 7-8 Form A and Question 16 in the Grade 7-8 Form B) regarding school climate:

1) I enjoy school;
2) My school is a friendly and welcoming place;
3) My school building is an attractive and great place to learn;
4) I get along well with other students in my school;
5) I feel accepted by students in my school;
6) I feel accepted by adults in my school; and
7) Extra help is available at this school when I need it.

Figure 1 shows the plot of the two groups of the above seven survey items related to school climate from the Grade 7-8 student responses, based on the statistical analysis ${ }^{1}$ :

Figure 1: Grouping of School Climate Variables


[^0]It becomes very clear that Item 4 (I get along well with other students in my school) and Item 5 (I feel accepted by students in my school) are closely related as they are questions about relationships with other students; while the other five items (1-3 and 6-7) are about student perceptions on the overall school environment, (i.e., enjoying school, feeling that the school is a friendly and welcoming place, feeling accepted by school adults, feeling extra help is available at school, etc.). Therefore, instead of using all seven survey items, two calculated variables from the survey items related to school climate were used in this report. Similarly, survey items related to class participation, relationships with school adults, school safety, and inclusive school experiences were statistically combined into another four new variables. The raw scores of all these calculated variables were then converted into five categories, representing "All the Time", "Often", "Sometimes", "Rarely", and "Never", to measure students’ school experiences.

In summary, student perceptions on school experiences have been classified into the following six major themes, based on the statistical analysis of the categories used by Yau \& O'Reilly in their report:

- Overall School Environment - derived from survey items in enjoying school, feeling accepted by school adults, viewing school as a friendly and welcoming place, feeling extra help is available at school, and viewing the school building as an attractive and great place to learn;
- Class Participation - derived from survey items in feeling comfortable participating in class activities and discussions, answering questions, and speaking up to give their own opinions in class;
- Relationships with Other Students - derived from survey items in getting along with other students in school, and feeling accepted by students in school;
- Relationships with School Adults - derived from survey items in perception of teacher expectations, feeling supported and encouraged by teachers, feeling comfortable to discuss problems with teachers, and the student's background being respected by school staff;
- School Safety - derived from survey items in feeling safe in classrooms, in different locations in the school buildings, and outside on school properties; and
- Inclusive School Experiences - derived from survey items in student opinions towards school recognizing and addressing different issues in gender, cultural, racial and faith backgrounds, and sexual orientation.

In this study, student demographic backgrounds in gender, race, country of birth, parent presence at home, parent education and family socio-economic status (SES), as well as student grade in the 2006-2007 school year and program of study (Grade 9-10 students only), were used as student demographic variables to examine student experiences in the TDSB schools. Grade 7-8 students' achievement results in June 2007 report card Reading, Writing, Mathematics, Science, and Grade 9-10 students' course marks in English and Mathematics, credit accumulation, and outcomes from the Ontario Secondary School Literacy Test (OSSLT), were used as academic indicators to investigate the correlations of students' school experiences with their academic achievement.

## SCHOOL EXPERIENCES BY STUDENT DEMOGRAPHIC BACKGROUNDS

The high return rates of the 2006 Student Census surveys, $92 \%$ for Grades 7-8, and 81\% for Grades 9-12, indicated that the student perception data collected by the surveys are quite representative for the TDSB senior and secondary students. The following sections examine students' experiences in school for different student groups, i.e., by student grade and program of study, student gender, racial background, birth place, parent presence at home, parent education, and family socio-economic status (SES).

## School Experiences by Student Grade

Figures 2-7 show the Grade 7-12 students' school experiences by their grades in the 2006-2007 school year, at which time the Student Census surveys were conducted.

It can be seen that student satisfaction with the overall school environment varied by student grades (see Figure 2): 82\% of Grade 7 students felt comfortable all the time or often with their schools, while only $64 \%$ of Grade 12 students reported so. The unsatisfied students (reported as "Rarely or Never") increased from 4\% in Grade 7 to 9\% in Grade 12. Interestingly, the Grade 8 and 9
 students, as well as the Grade 11 and 12 students, had almost the same view about their schools.

Figure 3 shows the Grade 7-12 students' perception on their class participation, e.g., feeling comfortable participating in class activities and discussions, feeling comfortable answering questions, and speaking up to give their own opinions in class. It can be seen that class participation declines with student grades: 69\% of Grade 7 vs. 57\% of Grade 12 students, indicated they feel comfortable all
 the time or often participating in class activities, while disengaged students (reported as "Rarely or Never") increased from 9\% in Grade 7 to 13\% in Grade 12.

Figure 4 shows the results of the Grade 7-12 students' relationships with other students in school, and Figure 5 shows their relationships with school adults. Although not a factor in terms of getting along with other students in school, student grade or age does have an impact on defining student relationships with school adults: the younger the students, the higher the proportions of students who feel comfortable with schools adults ( $90 \%$ in Grade 7 and $72 \%$ in Grades 11-12).


Figure 6 shows the Grade 7-12 students' perceptions on school safety. More than $80 \%$ of students, regardless of their grades, reported that they feel safe all the time or often in school (classrooms, different locations in the school buildings, and outside on school properties). However, a notable proportion of students (4-6\%) indicated they rarely or never feel safe in school. Further investigation is needed to identify and to address the concerns of these students.


Students' inclusive school experiences were calculated from their opinions towards their schools recognizing and addressing differences in student gender, cultural, racial and faith backgrounds, and sexual orientation. Figure 7 shows there is no clear pattern in students' inclusive school
experiences by their grades. However, although the majority of students reported they feel positive in this area, an alarming proportion of students, ranging from 12\% in Grade 12 to $21 \%$ in Grade 9, indicated they feel their schools are not inclusive - another area which needs further investigation in order to address the concerns of these students.

## School Experiences by Program of Study (Grades 9-10 Only)

The programs of study for the Grade 9-10 students, namely Academic (university-directed), Applied (college-directed), and Locally-developed (workplace-directed), have been determined by the levels of the majority of their courses taken during the school year (Brown \& Sinay, 2008). Figures $8-13$ show the Grade 9-10 students' school experiences by their program of study in the 2006-2007 school year.


It becomes clear that more students in the Academic program enjoyed school than students in the Applied or Locally-developed programs (see Figure 8). Although the number of Grade 9-10 students in the Applied and Locally-developed programs are relatively smaller than the number of students in the Academic program, the percentages of school-disengaged students in the Applied and Locally-developed programs are double or more (10\% and 13\%) than students in the Academic program (5\%). Similar patterns can be seen in their class participation (see Figure $9)$.

Figures 10 and 11 show the Grade 9-10 students' relationships with other students in school and with school adults. There are significant differences in the students' experience in getting along with other students: more students in the Academic program (90\%) tend to feel comfortable all the time or often with other students than students in the Applied (80\%) or Locally-developed programs (71\%). With respect to their relationships with school adults, students in the Applied and Locally-developed programs showed a similar pattern of feeling less comfortable with school adults than do students in the Academic program (see Figure 11).


Figure 12 shows the Grade 9-10 students' experience on school safety. There are more students in the Academic program who felt safe at school all the time or often (85\%), while only $66 \%$ of students in the Locally-developed program felt safe at school. It should be pointed out that there are only a small number of students in the Locally-developed program included in this study. Therefore the comparison presented here needs to be treated with caution.


There is no big difference by program of study in terms of the Grade 9-10 students' inclusive school experience, although the proportion of students who disagreed that schools are inclusive tend to be higher for the Grade 9-10 students in the Applied and Locally-developed programs than students in the Academic program (see Figure 13).

## School Experiences by Student Gender

Brown \& Sinay (2008) reported that there is a lower proportion of male students in both Grades 7-8 and Grades 9-10 reaching academic standards in various measurements such as report card Reading, Writing, Mathematics, Science, credit accumulation, and the Ontario Secondary School Literacy Test (OSSLT) than female students. Although there are many factors which may contribute to the discrepancy of achievement results for male and female students, it would be interesting to examine students' school experiences by student gender, using the rich data gathered from the TDSB's 2006 Student Census.

Figure 14 shows the Grade 7-12 students' perception on the overall school environment by student gender. It can be seen that while the majority of students said they feel comfortable with their overall school environment, a higher proportion of female students (than male students) enjoy school all the time or often in both Grades 7-8 and Grades 9-12. In contrast, at the secondary level 4\% more male students indicated they rarely or never feel comfortable with the overall school environment than female students.


In terms of class participation, more male students in both Grades 7-8 and Grades 9-12 indicated that they participate in class all the time or often than did female students (see Figure 15).

There is no gender difference regarding relationships with other students for both senior and secondary students (see Figure 16), and there is a very small gender difference in terms of student experience with school adults (see Figure 17). However, fewer students in Grades 9-12, for both genders, indicated that they feel comfortable all the time or often with school adults in comparison to students in Grades 7-8.


There is no gender difference in students' perceptions on school safety (see Figure 18), and a $4-5 \%$ gender difference favouring females was observed in students' inclusive school experience in the all the time or often category (see Figure 19).


## School Experiences by Student Racial Background

In their study, Brown \& Sinay (2008) reported that significant achievement gaps exist for certain student racial groups in the TDSB: 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. As school engagement plays a significant role in student learning (see the "Correlation of Students' School Experiences with Achievement" Section of this report), it is necessary to examine students' school experiences by their racial backgrounds.

Figure 20 shows the satisfaction with the overall school environment of the Grade 7-12 students by their racial backgrounds. South Asian students, in both the elementary and secondary panels, had the highest proportion indicating they enjoy school all the time or often, followed by Middle Eastern students. Black, Latin, and Mixed students had the lowest proportion of students indicating they enjoy school all the time or often. East Asian and White students are in between, along with Southeast Asian students.


In terms of class participation, White students had the highest proportion indicating they participate in class all the time or often, followed by Middle Eastern, and South Asian students. Only about half of Southeast Asian, East Asian, and Latin students (46\%-57\%) indicated they participate in class all the time or often (see Figure 21).

Figures 22 and 23 show the Grade 7-12 students' relationships with other students in school and with school adults. One can see that student perceptions are not much different among student racial groups, although South Asian students tend to have a slightly higher proportion indicating they feel comfortable with other students and with school adults.


The majority of students said they feel safe at school all the time or often, although Southeast
Asian and Black students had slightly smaller proportions than the other racial groups (see Figure 24).


In terms of inclusive school experiences, only about one third of East Asian (33\%), Southeast Asian (35\%), and White (37\%) students in Grades 7-8 indicated they view school as an inclusive place. In the secondary panel, Latin (34\%), East Asian (36\%), and White (37\%) students had the lowest proportions indicating they view school as an inclusive place to learn (see Figure 25).

## School Experiences by Student Place of Birth

In Fall 2006 when the Student Census was conducted, 29\% of all TDSB students (Kindergarten - Grade 12) were born outside of Canada in more than 175 countries or regions. The TDSB's student registration data shows there are more students in secondary schools born outside Canada (40\%) than elementary students (24\%). Figures 26 to 31 show the survey results on school experiences for the two student groups: born in Canada and born outside Canada.


Although about 10\% fewer secondary students tend to enjoy school than Grade 7-8 students, students born outside Canada feel more comfortable with their school environment than students born in Canada (see Figure 26). However, there is not much difference in terms of class participation (see Figure 27), relationships with other students (see Figure 28), relationships with school adults (see Figure 29), and school safety (see Figure 30). Students born outside Canada had $5 \%-11 \%$ more students indicating they view school as an inclusive place to learn than students born in Canada (see Figure 31).

## School Experiences by Sexual Orientation (Grades 9-12 only)

In the 2006 Student Census, Grade 9-12 students were asked about their sexual orientation. Three categories have been employed in this report and in the previous two research reports: Heterosexual, Lesbian/Gay/Bisexual/Transgender/Queer (LGBTQ), and Unsure/Questioning. According to Brown \& Sinay (2008), caution needs to be taken with the 'unsure' category as it appeared some students chose this because they were unclear about the terminology used in the survey (e.g., ESL students), while others answered this as they themselves were questioning their sexual orientation.

While 69\% of heterosexual Grade 9-12 students indicated they feel comfortable with the overall school environment all the time or often, only $52 \%$ of LGBTQ students said so (see Figure 32). On the other hand, 20\% of LGBTQ students reported that they rarely or never enjoy school, compared with $8 \%$ of heterosexual students. However, the difference in class participation is quite small (3\%) for the above two student groups (see Figure 33).


There are also significant differences in Grade 9-12 students' relationships with other students in the school and with school adults: 69\% of LGBTQ students reported they felt comfortable with other students in the school, 17\% lower than heterosexual students (see Figure 34). In terms of relationships with school adults, $59 \%$ of LGBTQ students felt comfortable all the time or often, compared with 76\% of heterosexual students (another 17\% difference, see Figure 35).


Regarding school safety, 71\% of LGBTQ students reported they feel safe at school all the time or often, which is $12 \%$ lower than heterosexual students (see Figure 36). On the other hand, $10 \%$ more LGBTQ than heterosexual students indicated they rarely or never feel safe at school.



There is not much difference by student sexual orientation regarding their inclusive school experience (see Figure 37).

## School Experiences by Parent Presence at Home

In the 2006 Student Census, Grade 7-12 students were asked to identify their parent presence at home. In this report, living with both parents includes living with father and mother together, mother and step-father, father and step-mother, and half of the time with each. Living with others includes living with adult relatives/guardians (e.g., grand parents), group home, foster parents, with friends or others, and on their own.

Students living with both parents had higher proportion of students feeling comfortable with the overall school environment than students living with mother only, or with father only (see Figure 38). For Grade 7-8 students, the differences are $8 \%$ and 11\%; for Grade $9-12$ students, the differences are $8 \%$ and $6 \%$. For students living with others in comparison with students living with both parents, the gap is more significant at the secondary level (12\%) than in Grades 7-8 (6\%). Students living with both parents also participated more in class than students living with a single parent or others (see Figure 39).


Similar patterns have been observed in Grade 7-12 students' relationships with other students in the school (see Figure 40) and their relationships with school adults (see Figure 41).


There are small differences in students' experiences on school safety (see Figure 42) and on viewing schools as inclusive places to learn (see Figure 43).


| Figure 43: Viewing School As An Inclusive Place to Learn - by Parent Presence at Home <br> $\square$ All the Time/Often a Sometimes $\quad$ Rarely/Never |  |  |  | $\begin{gathered} \text { Total } \\ 10,745 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Two Parents | 4\% | 43\% | 17\% |  |
| $\stackrel{\sim}{\sim}$ | 40\% | 43\% | 16\% | 2,273 |
| ஸ゙ Father Only | 38\% | 40\% | 22\% | 241 |
| Others | 44\% | 39\% | 17\% | 405 |
| ก Both Parents | 40\% | 45\% | 15\% | 21,063 |
| o'. Mother Only | 37\% | 45\% | 18\% | 5,094 |
| O. Father Only | 36\% | 47\% | 17\% | 776 |
| Others | 42\% | 36\% | 22\% | 1,286 |

## School Experiences by Parent Education

In the 2006 Student Census, students were also asked to identify the education levels of their mothers and fathers. About 39\% of the Grade 7-8 students and 24\% of the Grade 9-12 students chose "Don't Know' in their responses to the two survey questions. Therefore, the following results should be treated with caution. In this report, mother's and father's education levels were combined into parent education by taking the higher education level of the parents ${ }^{2}$.

Parent education seems to have less impact on students' satisfaction with overall school environment (see Figure 44), but has a significant impact on students' class participation: the higher the parent's education, the higher proportion of students participated in class (see Figure 45).



However, parent education seems to have less impact on the Grade 7-12 students' relationships with other students, relationships with school adults, feeling safe at school, or viewing schools as an inclusive place to learn (see Figures 46-49).

[^1]

## School Experiences by Family Socio-economic Status

Family socio-economic status (SES), derived from students' parents' employment status and occupations, employs the following five categories (for more details refer to Yau and O'Reilly's report, 2006):

- Professional and senior management
- Semi-professional and middle management
- Skilled/semi-skilled clerical and trades
- Unskilled clerical and trades
- Non-remunerative

Figure 50 shows the Grade 7-12 students' satisfaction on their overall school environment by their family SES and Figure 51 shows their participation in class. One can see that the differences among the five student groups are small or have no difference, indicating family SES doesn't have much influence on students' overall school satisfaction. However, differences do exist in students' class participation: students from families with higher SES (professional
and senior management, and semi-professional and middle management) had higher proportion of students indicating they participated in class all the time or often than students from families of lower SES (skilled/semi-skilled clerical and trades, unskilled clerical and trades, and nonremunerative).


| Figure 51: Feeling Comfortable Participating in Class - by Family SES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\square$ All the Time/Often $\square$ Sometimes $\square$ Rarely/Never $\underline{\text { Total }}$ |  |  |  |  |  |
|  | Professional | 77\% | 17\% | 6\% | 3,072 |
| $\infty$ | Semi-Professional | 73\% | 20\% | 8\% | 3,529 |
| $\stackrel{\sim}{\square}$ | Skilled | 65\% | 26\% | 9\% | 3,403 |
| ৩ | Unskilled | 65\% | 24\% | 11\% | 1,650 |
|  | Non-Remunerative | 62\% | 27\% | 11\% | 402 |
|  | Professional | 69\% | 23\% | 8\% | 6,849 |
| ন | Semi-Professional | 64\% | 26\% | 9\% | 7,534 |
| ভ゙ | Skilled | 57\% | 30\% | 13\% | 5,689 |
|  | Unskilled | 56\% | 31\% | 13\% | 2,640 |
|  | Non-Remunerative | 60\% | 29\% | 11\% | 667 |

Family SES also plays a small role on students' relationships with other students (see Figure 52), but has no impact on students' relationships with school adults (see Figure 53).


For secondary students, family SES seems to have some impact on their experience in school safety; for the Grade 7-8 students, the impact is less (see Figure 54).



There is no clear relationship of students' inclusive school experience with their family socioeconomic status (see Figure 55).

## CORRELATION OF STUDENTS' SCHOOL EXPERIENCES WITH ACHIEVEMENT

In this section, the Grade 7-8 students' school experiences with the overall school environment, class participation, relationships with other students, relationships with school adults, school safety and inclusive school were examined with their academic achievement in Grades 7-8 report card marks for Reading, Writing, Mathematics, and Science. For the Grade 9-10 students, achievement results in final course marks in English and Mathematics, credit accumulation, and the Ontario Secondary School Literacy Test (OSSLT), were linked to students' school experiences to investigate the correlation of the students' school experience with their achievement. In addition, students' school attendance in the 2006-2007 school year was used as an extra indicator to examine the impact of school experiences on student learning.

## Overall School Environment

Figures 56-59 show the Grade 7-8 students' results on the 2006-2007 Term 3 report card Reading, Writing, Mathematics, and Science, disaggregated by students' experience on the overall school environment. On the report card, Level 3 represents the provincial standard, Level 2 means below the provincial standard but approaching standard, while Level 1 or below means significantly below the provincial standard.

There are direct relationships between students' experience with overall school environment and their achievement in all four subjects: the more students feel comfortable with the overall school environment, the higher the proportion of students meeting the provincial standard (Level 3 or above). For students who indicated that they rarely or never feel comfortable with the overall school environment, significant proportions of them were at-risk, i.e., achieved Level 1 or below: Reading (18\%), Writing (19\%), Mathematics (25\%), and Science (30\%).



Similar patterns exist in the English and Mathematics course marks for the Grade 9-10 students (see Figures 60 and 61). For students who took the English as a Second Language (ESL) or English Literacy Development (ELD) course during the school year, their marks were not disaggregated by levels.


Figure 62 shows the Grade 9-10 students' credit accumulation by the end of the school year, including summer school. Students earning six or fewer credits by the end of Grade 9, or earning fourteen or fewer credits by the end of Grade 10, were considered at-risk (students normally earn eight credits per school year). Figure 63 shows the Grade 10 students' outcomes from the 2006-2007 Ontario Secondary School Literacy Test (OSSLT), a requirement of the Ontario Secondary School Diploma (OSSD).



Similar to the other findings, students who feel comfortable with the overall school environment all the time or often tend to have a much better chance of accumulating enough credits and of passing the OSSLT, than students who claimed they rarely or never enjoy school.

Figures 64 and 65 show the Grade 7-8 and Grade 9-10 students' school attendance by their experience with their overall school environment. In this report, student's annual school attendance rate is defined as number of days attending school divided by the total number of school days during the school year. For students who moved in or out during the school year, their attendance rates were adjusted based on their entry and exit dates.


Students who indicated they feel comfortable with the overall school environment tend to attend school more than students feeling comfortable sometimes, and students rarely or never feeling comfortable: in Grades 7-8, 62\% of students attended $96 \%$ or more school days, compared with $46 \%$ of students who claimed they rarely or never enjoy school. In Grades 9-10, the difference between the two groups is $18 \%$ ( $69 \%$ vs. $51 \%$ ).

## Class Participation

Grade 7-8 students feeling comfortable participating in class all the time or often tend to have higher achievement results in the four subject areas of Reading, Writing, Mathematics, and Science in report card (see Figures 66-69). For students who indicated they rarely or never feel comfortable participating in class discussions and activities, about half of them achieved the provincial standards, and a much higher proportion of these students achieved Level 1 or below: 16\% in Reading, 17\% in Writing, 24\% in Mathematics, and 26\% in Science.



Similar patterns have been observed in Grade 9-10 English and Mathematics (see Figures 7071), credit accumulation (see Figure 72), and in the OSSLT (see Figure 73).


Figures 74-75 show the Grade 7-10 students' school attendance in the 2006-2007 school year, disaggregated by their school experience in class participation. Interestingly, students' class participation had less influence on their school attendance than on their academic achievement.


## Relationships with Other Students

Figures 76-79 show the Grade 7-8 students' results on the 2006-2007 Term 3 report card Reading, Writing, Mathematics, and Science, disaggregated by students' experience with other students in school. For Grade 7-8 students who get along well with other students, about two thirds of them achieved Level 3 or 4 in the four subject areas, compared with about one half of students who reported they rarely or never feel comfortable with other students (on the other hand, a much higher proportion of these students achieved Level 1 or below).


Similar patterns were observed for the Grade 9-10 students (see Figures 80-83). The achievement gaps in English and Mathematics are 17\% and 12\% in Levels 3 and 4 between students feeling comfortable with other students all the time or often and students who rarely or never feel comfortable with other students. In credit accumulation, $14 \%$ more were highly at-risk for students rarely or never feeling comfortable with other students. In OSSLT, the gap for the two groups is $18 \%$ in passing the provincial literacy test for the first time.



Relationships with other students also had some impact on the Grade 7-10 students' school attendance. About 10\% more students attended $96 \%$ or more school days when they always feel comfortable with other students than students who indicated they rarely or never feel comfortable with other students (see Figures 84-85).



## Relationships with School Adults

The majority (89\%) of the Grade 7-8 students indicated that they feel comfortable with school adults, $9 \%$ said they sometimes feel comfortable with school adults, and 1\% said they rarely or never feel comfortable with school adults. There is a clear achievement pattern for the three student groups - less than half of the students who do not feel comfortable with school adults achieved Level 3 or 4 on their report card for Reading, Writing, Mathematics, or Science. For students who feel comfortable all the time or often, about two thirds of them achieved at or above the provincial standard in the four subject areas in the 2006-2007 school year (see Figures 86-89).



Similar or wider achievement gaps existed for the Grade 9-10 students: 25\% and 23\% more students achieved Level 3 or 4 in the English and Mathematics courses if they fell into the category of always feeling comfortable with school adults in comparison to those who fell into the category of rarely or never feeling comfortable with school adults. In terms of credit accumulation, nearly one third (31\%) were highly at-risk amongst the students feeling uncomfortable with school adults, and $28 \%$ of them failed the OSSLT for the first time (see
Figures 90-93).



Relationships with school adults also played a role in students' 2006-2007 school attendance: students who always feel comfortable with school adults tend to have better school attendance than other students (see Figures 94-95).


## School Safety

About 4\% of the Grade 7-8 students indicated they rarely or never feel safe at school. For these students, less than half achieved Level 3 or 4, and 19-30\% achieved Level 1 or below on their report card for Reading, Writing, Mathematics, or Science in the 2006-2007 school year. For students who reported they feel safe all the time or often, the proportions of students at Level 3 or 4 are between 64\%-68\% in the four subject areas (see Figures 96-99).



Similar patterns have been observed for the Grade 9-10 students (see Figures 100-103). For students who indicated they rarely or never feel safe at school, $41 \%$ achieved a mark of 70 or higher (Level 3 and 4) in English, while 26\% had a mark below 60 (Level 1 or below). For the majority of students who always feel safe at school, the proportion of students achieving Level 3 or 4 in English was 58\%, 17\% higher. For students who feel unsafe, a significant proportion of them were highly at-risk (25\%) or failed the literacy test (28\%).


Feeling unsafe at school might also have some impact on students' school attendance, but not as significant as on students' achievement (see Figures 104-105).


## Inclusive School Experience

Figures 106-109 show the Grade 7-8 students' results on the 2006-2007 Term 3 report card marks of Reading, Writing, Mathematics, and Science, disaggregated by students' inclusive school experience. One can see that students' inclusive school experience had little or no impact on student achievement in Grades 7-8.


Similarly, the Grade 9-10 students' inclusive school experience had little or no impact on student achievement results in English, Mathematics, credit accumulation, or the Ontario Secondary School Literacy Test (see Figures 110-113).


Finally, it seems students' inclusive school experiences had some connection with the Grade 910 students' school attendance in the 2006-2007 school year, but not for the Grade 7-8 students (see Figures 114-115).


## SUMMARY OF FINDINGS

The Toronto District School Board (TDSB) Student Census, conducted with the Grade 7-12 students in the Fall 2006, has provided the Board a unique opportunity to collect student demographic and school experience data. Two TDSB research reports, by Yau and O'Reilly (2007), and Brown and Sinay (2008), have provided detailed analyses of the demographic characteristics and school experiences of the TDSB Grade 7-12 students, and of the impact of student demographics on their academic achievement. As recommended by both reports, this report addressed students' school experiences by their demographic backgrounds, and the impact of school experiences on students' academic achievement.

The responses to the original Student Census survey questions related to school experiences have been statistically combined into six major categories based on their correlations: overall school environment, class participation, relationships with other students, relationships with school adults, school safety, and inclusive school experience. Students' school experiences in these six areas then have been closely examined by student grade, program of study in Grade 9 and 10, student gender, racial background, birth place, parent presence at home, parent education, and family socio-economic status (SES). Grade 7-8 students' achievement results in report card marks of Reading, Writing, Mathematics, and Science, and Grade 9-10 students' final course marks in English and Mathematics, accumulated credits by the end of Grade 9 and 10, and their outcomes on the Ontario Secondary School Literacy Test (OSSLT), were linked to students' school experiences to investigate the impacts of students' school experiences on their academic achievement. In addition, the Grade 7-10 students' school attendance in the 20062007 school year was examined by their school experiences.

## School Experience by Student Grade

Although the majority of Grade 7-12 students indicated they feel comfortable with the overall school environment and with participating in class, the overall school satisfaction varied by student grades: the lower the grade, the more students enjoy school and participate in class all the time or often. However, student grade or age is not a factor by which students define their relationships with other students in school. With regards to their relationships with school adults, there are higher proportions of younger students than older students (90\% in Grade 7 and 72\% in Grade 11/12) who indicated they feel comfortable with schools adults. Although more than $80 \%$ of students, regardless of their grade levels, indicated they feel safe at school all the time or often, a notable proportion of students (4-6\%) reported they rarely or never feel safe in schools. Students' inclusive school experience is not affected by their grade levels.

## School Experience by Program of Study

There are more Grade 9-10 students in the Academic program feeling comfortable with the overall school environment and with participating in class than in the Applied or Locallydeveloped programs. The proportion of school-disengaged students in the Applied and Locallydeveloped programs are double or more than students in the Academic program. Students in the Academic program had higher proportions of students feeling comfortable with other students and school adults, and feeling safe at school than students in the Applied or Locallydeveloped programs. There is no big difference by program of study in terms of students' inclusive school experience, although the proportion of students who disagreed that schools are inclusive are higher for students in the Applied and Locally-developed programs than for students in the Academic program.

## School Experience by Student Gender

While the majority of students indicated they feel comfortable with their overall school environment, female students had a higher proportion (5-6\% higher) than male students. In terms of class participation, more male students (7-8\% higher than female students) in both Grades 7-8 and Grades 9-12 indicated that they participate in class all the time or often. There is no gender difference with regard to students' relationships with other students and feeling safe at school. There is a very small gender difference ( $2-5 \%$ more female students) in students' relationships with school adults and in viewing school as an inclusive place to learn.

## School Experience by Student Racial Background

South Asian students, in both the elementary and secondary panels, had the highest proportion indicating they enjoy school, followed by Middle Eastern students. Black, Latin, and Mixed students had the lowest proportions, with East Asian, White, and Southeast Asian students in between. White students had the highest proportion feeling comfortable participating in class all the time or often, followed by Middle Eastern and South Asian students. Only about half of the Southeast Asian, East Asian, and Latin students (46\%-57\%) indicated they participate in class all the time or often. With regard to student relationships with other students and with school adults, the perceptions are not much different by student racial groups, although South Asian students tend to have a slightly higher proportion feeling comfortable with other students and with school adults. The majority of students indicated they feel safe at school all the time or often, although Southeast Asian and Black students had slightly lower proportions feeling safe at school than other racial groups. About one third of East Asian, Southeast Asian, and White students in Grades 7-8 indicated they view school as an inclusive place to learn. For secondary, Latin (34\%), East Asian (36\%), and White (37\%) students had the lowest proportions indicating they view school as an inclusive place to learn.

## School Experience by Student Place of Birth

Approximately 5\% more of students born outside Canada reported they feel comfortable with the overall school environment in comparison to students born in Canada. In addition, 5\% more students in Grades 7-8 and 11\% more students in Grades 9-12 viewed school as an inclusive place to learn. There is not much difference with regards to class participation, relationships with other students, relationships with school adults, and school safety.

## School Experience by Sexual Orientation

Sixty-nine percent (69\%) of heterosexual Grade 9-12 students indicated they feel comfortable with the overall school environment all the time or often, compared with $52 \%$ of Lesbian/Gay/Bisexual/Transgender/Queer (LGBTQ) students. There are also 12\% more LGBTQ students indicating they rarely or never feel comfortable with school. In terms of relationships with other students and with school adults, $17 \%$ more heterosexual students indicated they feel comfortable all the time or often than LGBTQ students. With regard to school safety, $71 \%$ of LGBTQ students reported they feel safe at school all the time or often, which is $12 \%$ lower than heterosexual students. On the other hand, $10 \%$ more LGBTQ students indicated they do not feel safe at school.

## School Experience by Parent Presence at Home

Students living with both parents had a higher proportion feeling comfortable with the overall school environment than students living with a single parent. For the Grade 7-8 students, the differences are $8 \%-11 \%$; for the Grade 9-12 students, the differences are 6\%-8\%. Students living with both parents also tend to participate in class more and to have better relationships with other students and with school adults than students living with a single parent or with others.

## School Experience by Parent Education

Parent education has less impact on students' satisfaction with overall school environment than on students' class participation: the higher the parent education, the more students indicated they feel comfortable participating in class all the time or often. Parent education also seems not to have much influence on students' relationships with other students or with school adults, or on their perceptions of school safety and viewing school as an inclusive place to learn.

## School Experience by Family SES

Family socio-economic status (SES), derived from student parents' employment status and occupations, has less influence on students' overall school satisfaction than on students' class participation: more students from families with higher SES feel comfortable participating in class all the time or often than students from families with lower SES. Family SES also plays some role on students' relationships with other students, but has no impact on students' relationships with school adults. There is no clear relationship of students' inclusive school experience with their family socio-economic status.

## Overall School Environment and Academic Achievement

There are direct correlations between the Grade 7-8 students' perception of overall school environment with their academic achievement in all four subjects of Reading, Writing, Mathematics, and Science in report card: the more students enjoying school, the higher proportion of students meeting the provincial standard (Level 3 or above). For students who indicated they rarely or never feel comfortable with the overall school environment, significant proportions of them appeared to be at-risk (i.e., achieved Level 1 or below): Reading (18\%), Writing (19\%), Mathematics (25\%), and Science (30\%). Similar patterns exist in English and Mathematics course marks for the Grade 9-10 students. Also, students who feel comfortable with the overall school environment tend to have a much better chance of accumulating enough credits (seven or more credits by the end of Grade 9 and fifteen or more credits by the end of

Grade 10) and of passing the Ontario Secondary School Literacy Test (OSSLT) than students not enjoying school. In addition, students who indicated they feel comfortable with the overall school environment tend to attend school more than other students.

## Class Participation and Academic Achievement

Grade 7-8 students who feel comfortable participating in class all the time or often tend to have higher achievement results in the four subject areas than students not feeling comfortable participating in class. For students who claimed they rarely or never feel comfortable participating in class discussions and activities, only about half of them achieved the provincial standards, and they represented a much higher proportion of students achieving Level 1 or below: $16 \%$ in Reading, $17 \%$ in Writing, $24 \%$ in Mathematics, and $26 \%$ in Science. Similar patterns have been observed in Grade 9-10 English and Mathematics, credit accumulation, and the OSSLT. However, students' class participation had little or no impact on their school attendance.

## Relationships with Other Students and Academic Achievement

For the Grade 7-8 students who get along well with other students, about two thirds of them had achieved Level 3 or 4 in the four subject areas, compared with about one half of students who reported they rarely or never feel comfortable with other students (on the other hand, a much higher proportion of these students had achieved Level 1 or below). Similar patterns were observed for the Grade 9-10 students. The achievement gaps in English and Mathematics are $17 \%$ and $12 \%$ in Levels 3 and 4 between students feeling comfortable with other students all the time or often and students who rarely or never feel comfortable with other students. In credit accumulation, $14 \%$ more of the students who rarely or never feel comfortable with other students were highly at-risk in credit accumulation. In OSSLT, the gap for the two groups is 18\% in passing the provincial literacy test for the first time.

## Relationships with School Adults and Academic Achievement

The majority (89\%) of the Grade 7-8 students indicated that they feel comfortable with school adults all the time or often, while $9 \%$ said sometimes, and $1 \%$ reported they rarely or never feel comfortable. There are clear achievement gaps for the three student groups: less than half of the students not feeling comfortable with school adults had achieved Level 3 or 4 in report card marks of Reading, Writing, Mathematics, or Science; for students feeling comfortable all the time or often, about two thirds of them achieved at or above the provincial standard in the four subject areas in the 2006-2007 school year. Similar or wider achievement gaps existed for the

Grade 9-10 students: 25\% and 23\% more students achieved Level 3 or 4 in English and Mathematics courses for students always feeling comfortable with school adults than students rarely or never feeling comfortable. In terms of credit accumulation, nearly one third of students not feeling comfortable with school adults were highly at-risk, and $28 \%$ of them failed the OSSLT for the first time.

## School Safety and Academic Achievement

While the vast majority of students feel safe at school, about 4\% of the Grade 7-8 students indicated they rarely or never feel safe at school. For these students, less than half had achieved Level 3 or 4, and 19-30\% had achieved Level 1 or below in Reading, Writing, Mathematics, and Science on their 2006-2007 report cards. For students feeling safe at school all the time or often, the proportions at Level 3 or 4 are between $64 \%-68 \%$ in the four subject areas. Similar patterns have been observed for the Grade 9-10 students. For students who indicated they rarely or never feel safe at school, only $41 \%$ had achieved a mark of 70 or higher (Level 3 \& 4) in English, while 26\% had a mark below 60 (Level 1 or below). For the majority of the Grade 9-10 students who always feel safe at school, the proportion at Level 3 and 4 in English is $58 \%$, which is $17 \%$ higher than those who rarely or never feel safe at school. For students not feeling safe at school, a significant proportion was highly at-risk (25\%) in credit accumulation, or failed the literacy test (28\%).

## Inclusive School Experience and Academic Achievement

TDSB students' inclusive school experience seemed to have little or no impact on student achievement or school attendance.

In summary, this report drew on the recommendations of two previous TDSB research reports (Yau \& O’Reilly, 2007; Brown \& Sinay, 2008) which called for further investigation of student demographic background and student achievement data. With this goal in mind, student survey responses related to school experiences were analyzed by linking them to student demographic background and to student achievement as represented by report card data in Reading, Writing, Mathematics, Science, as well as by credit accumulation and the provincial literacy test. The findings presented here provide an overall global snapshot of student perceptions of their school experiences, as collected from a wide demographic range of TDSB students. Such detailed information deepens the collective understanding of the TDSB student population and contributes to its commitment to the principle of equity, so that ultimately, all students do indeed
learn and grow to their full potential, in environments that welcome differences and are free from discrimination.

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[^0]:    ${ }^{1}$ Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization.

[^1]:    ${ }^{2}$ Parent presence at home was used to guide the calculation of parent education, i.e., if a student indicated he or she lives with both parents, both mother and father education levels were used to calculate parent education by taking the higher level. If a student indicated living with a single parent, the education level of the parent was used.

