THE DPCDSB STUDENT CENSUS 2022

You are the people of God; he has loved you and chose you for his own. So then, you must clothe yourselves with compassion, kindness, humility, gentleness, and patience.

Colossians 3:12

Summary of Disproportionalities and Disparities: Grades 4-12

DPCDSB Student Census: Disproportionalities and Disparities

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Purpose of this Report

This report describes the racial disproportionalities and disparities observed for students in Grades 4 through 12 who completed the census themselves. A summary of information gathered via the parent- and guardian-completed census is available at www.dpcdsb.org.

Student Outcomes: Racial Disproportionality Indices

As per the requirements of the Anti-Racism Act's *Data Standards for the Identification and Monitoring of Systemic Racism*, "PSOs must conduct disproportionality and/or disparity analyses using outcomes of individuals accessing a program, service, or function", with such outcomes data use with "Indigenous identity, race, and race-related data" (Anti-Racism Directorate, 2019:46). Within the DPCDSB context, the disproportionality indices measure a racial group's over- or underrepresentation in programs of study, university access, and discipline relative to that racial group's population among all participating students in the DPCDSB student census. Identification of disproportionalities indicates where DPCDSB needs to focus its efforts to address and eliminate systemic racism.

The disproportionality indices yield continuous values greater than or less than 1.0, with 1.0 indicating proportionate representation. The greater the variation from 1.0 for a racial group's index score, the greater over- or underrepresented that group is in the selected outcome compared to their representation in DPCDSB. Staff found that audiences who were less familiar with research and statistics found it somewhat more difficult to understand these raw index scores, so staff converted the scores to percentages to make the findings easier to visualize and understand. By using percentages, staff could indicate the percentage more or less likely a group was to be over- or underrepresented in an outcome compared to their representation in the DPCDSB population. Staff identified disproportionalities of 10% or greater over- or underrepresentation as those warranting closer examination. On the other hand, percentages closer to zero demonstrated little difference from the corresponding DPCDSB mean and, therefore, little to no disproportionality of outcome. [1]

Access: Secondary School Program Pathways

Subjects in Ontario secondary schools are "streamed" into pathways that can open or restrict access to post-secondary education and workplace options for students. Staff examined disproportionalities by race in three key program pathways in English, mathematics, and science courses accessed by most secondary students: university-track, college-track, and workplace-track. Staff noted the following racial disproportionalities for each of the three program pathways and in each of the three core subjects observed:

- Indigenous students, Latinx students, and Black students were consistently overrepresented, compared to their relative populations in DPCDSB, in college and workplace track courses.

Figures 1, 2, and 3 (below and following page) illustrate the racial disproportionalities in terms of program pathways in English, mathematics, and science courses.

[1] A value of 1.0 means no disproportionality because the indices can be thought of as fractions. For example, if 23% of students accessing a secondary school program are South Asian is 23% and the population of South Asian secondary students in DPCDSB is 23%, then, as a fraction, the index score would be 0.23/0.23=1.0, or 0% disproportionate. If 50% of secondary students accessing a program are South Asian, compared to 23% of the DPCDSB secondary population being South Asian, then the index score would be 0.5/0.23=2.17, or 117% over-represented in the program.

Figure 1: Disproportionality in English Progam Pathways Grades 9-12

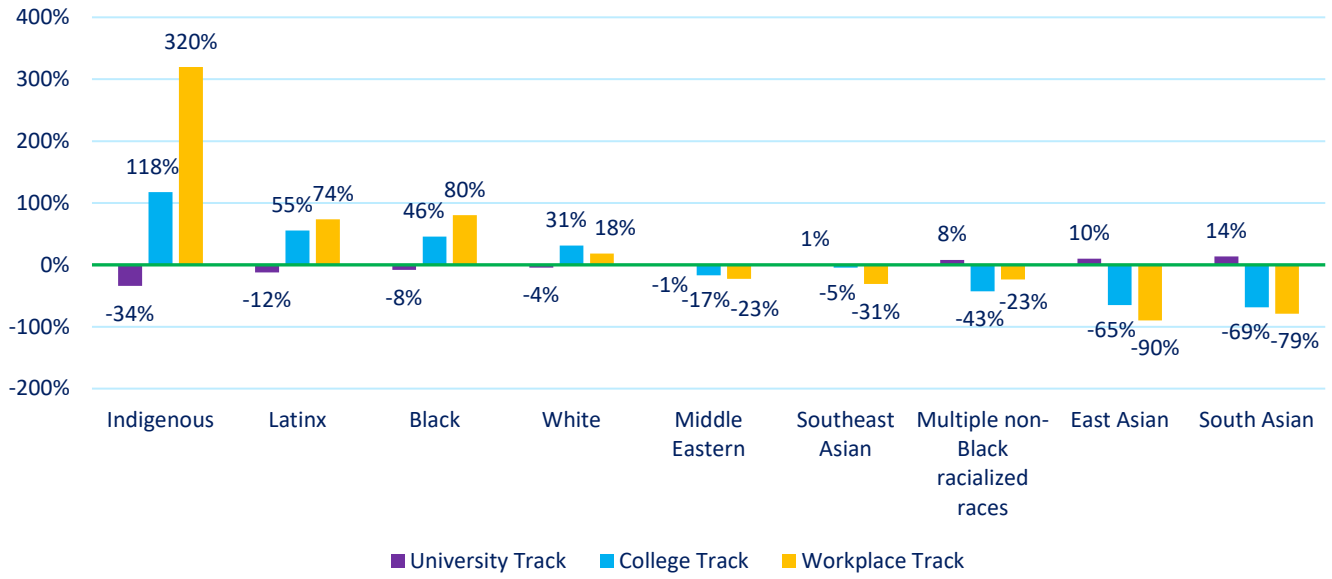
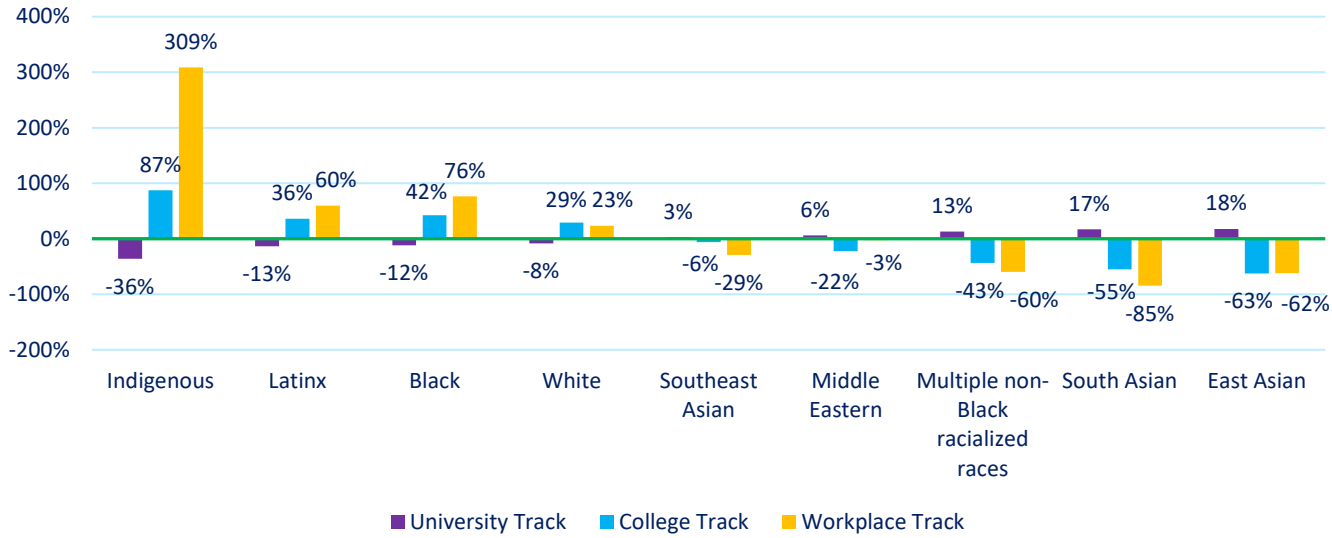
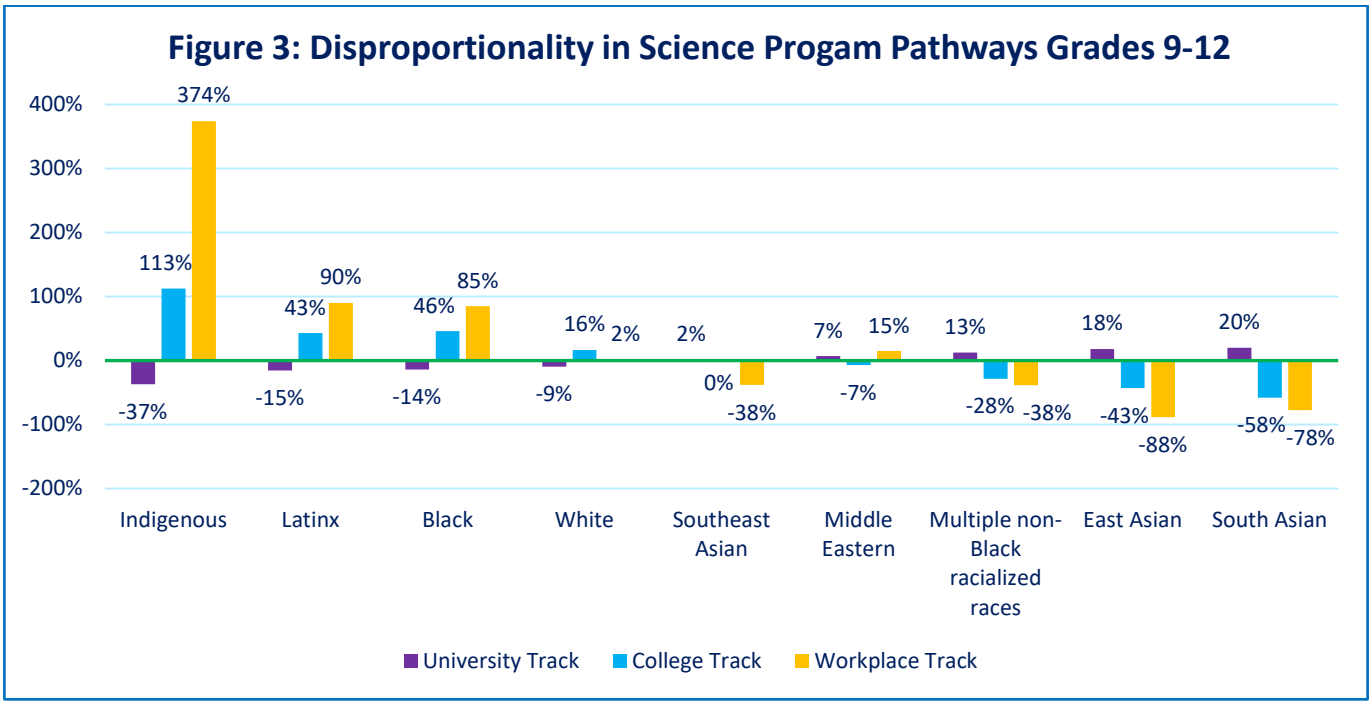


Figure 2: Disproportionality in Mathematics Progam Pathways Grades 9-12





Access: Grade 12 Mathematics and Senior Science

Staff examined disproportionalities by race in terms of students taking Grade 12 mathematics and those taking Grades 11 or 12 (or "senior") science courses. These measures are important because mathematics and science courses are required for several post-secondary and workplace pathways. However, completion of an Ontario Secondary School Diploma (OSSD) only requires three mathematics credits, which means that students can graduate without accessing a Grade 12 mathematics credit. Similarly, the OSSD only requires two science credits. Students choosing not to take a Grade 12 mathematics course or senior science courses may not be able to access their desired post-secondary or workplace destination requiring a Grade 12 mathematics credit and/or senior science courses. Additionally, lack of mathematics literacy is a concern for students as they navigate daily life.

Staff observed the following disproportionalities by racial group in terms of students taking at least one Grade 12 mathematics course, and for students taking at least one senior science course in 2021-2022:

- East Asian students and South Asian students were consistently overrepresented in accessing these courses.
- Indigenous students, Black students, and Latinx students were consistently underrepresented in these courses.

Figures 4 and 5 (below) illustrate the racial disproportionalities in accessing Grade 12 mathematics courses and senior science courses.

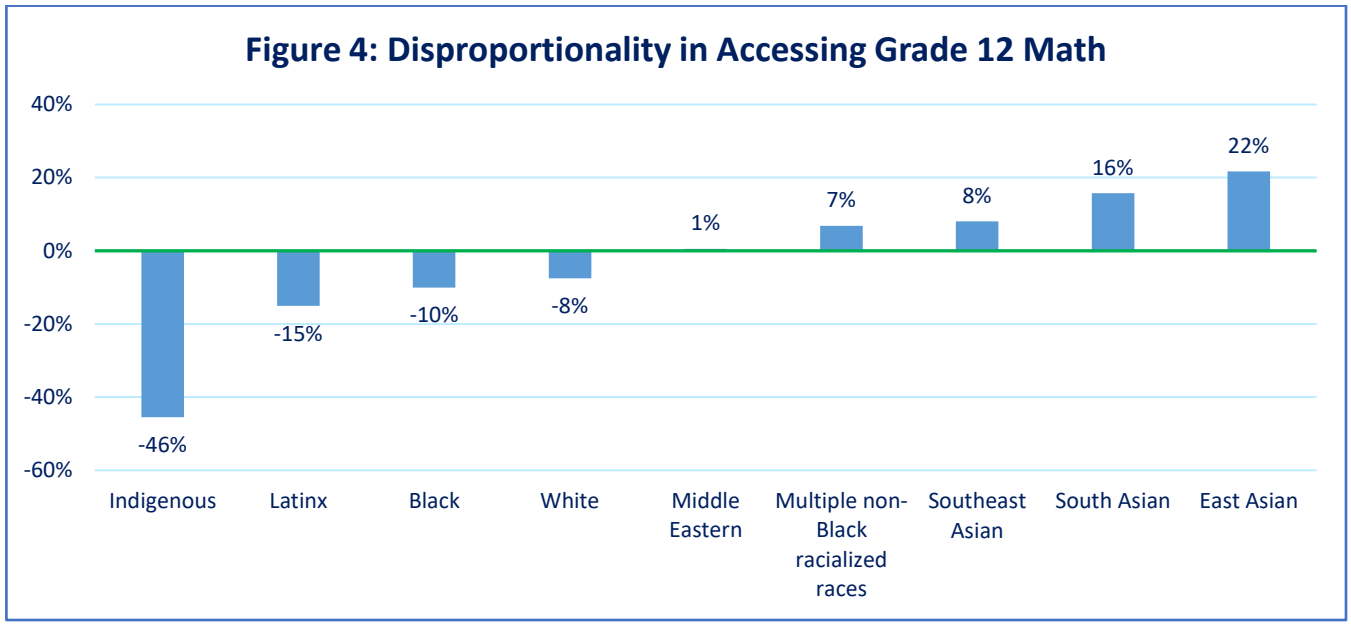


Figure 4: Disproportionality in Accessing Grade 12 Math
40%
20%
0%
-20%
-40%
-60%
-46%
-15%
-10%
-8%
1%
7%
8%
16%
22%
Indigenous
Latinx
Black
White
Middle Eastern
Multiple non-Black racialized races
Southeast Asian
South Asian
East Asian

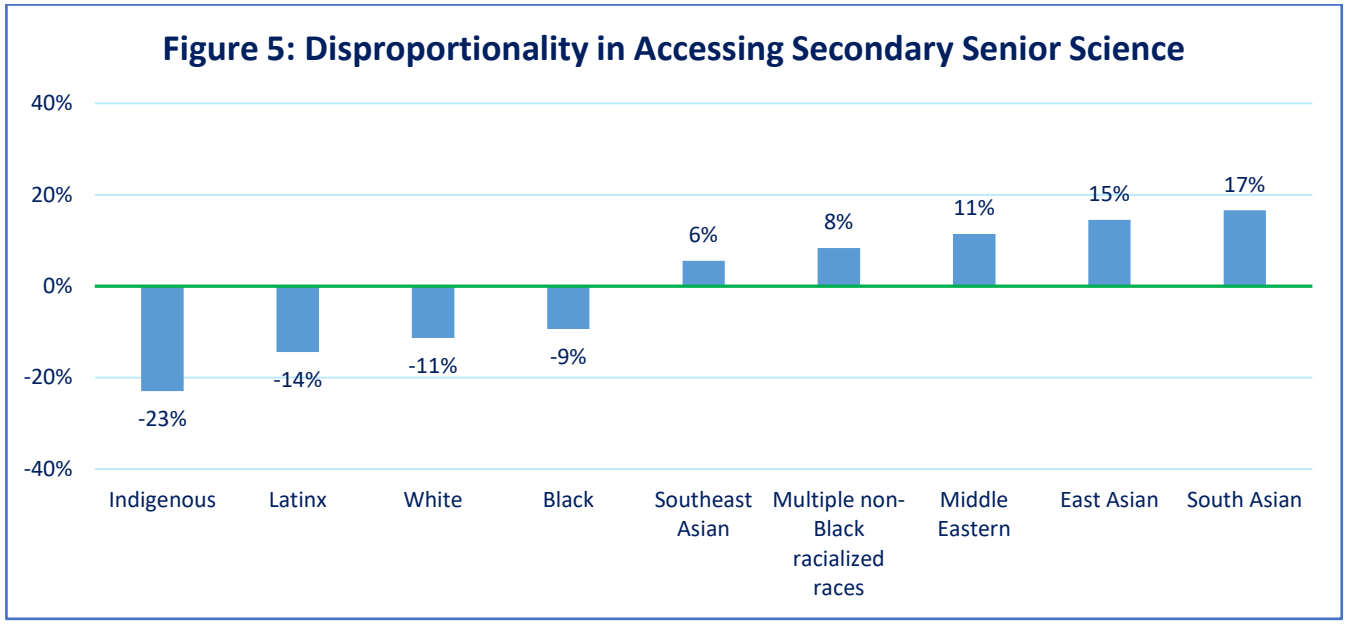


Figure 5: Disproportionality in Accessing Secondary Senior Science
40%
20%
0%
-20%
-40%
-23%
-14%
-11%
-9%
6%
8%
11%
15%
17%
Indigenous
Latinx
White
Black
Southeast Asian
Multiple non-Black racialized races
Middle Eastern
East Asian
South Asian

Access: Select Regional Programs of Choice

DPCDSB offers a variety of specialized programs that students can choose to access regionally, regardless of whether students live in the local community of the school hosting the regional program. The three programs observed included: International Baccalaureate (IB), Advanced Placement (AP), and Regional Arts.

Staff observed the following disproportionality by race in terms of enrollment in each of the three regional programs of choice:

- With the exception of some underrepresentation among South Asian students in elementary IB, East Asian students, South Asian students, and students reporting more than one non-Black racialized race were consistently overrepresented in both IB and AP programs, compared to their population in DPCDSB.
- Southeast Asian students, Black students, and Latinx students were overrepresented in the Regional Arts program compared to their respective populations in DPCDSB.

Figures 6, 7, and 8 (below and following page) illustrate the racial disproportionalities in accessing the IB, AP, and Regional Arts programs.

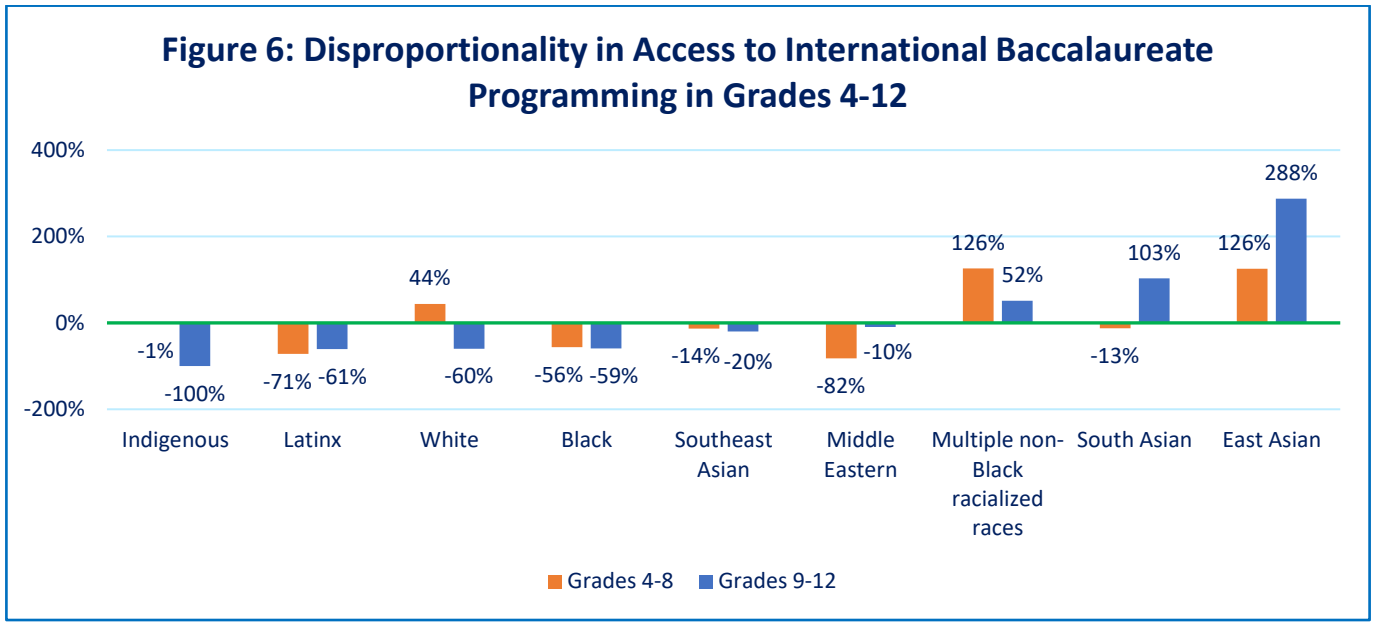


Figure 7: Disproportionality in Accessing AP Programming in Grades 9-12

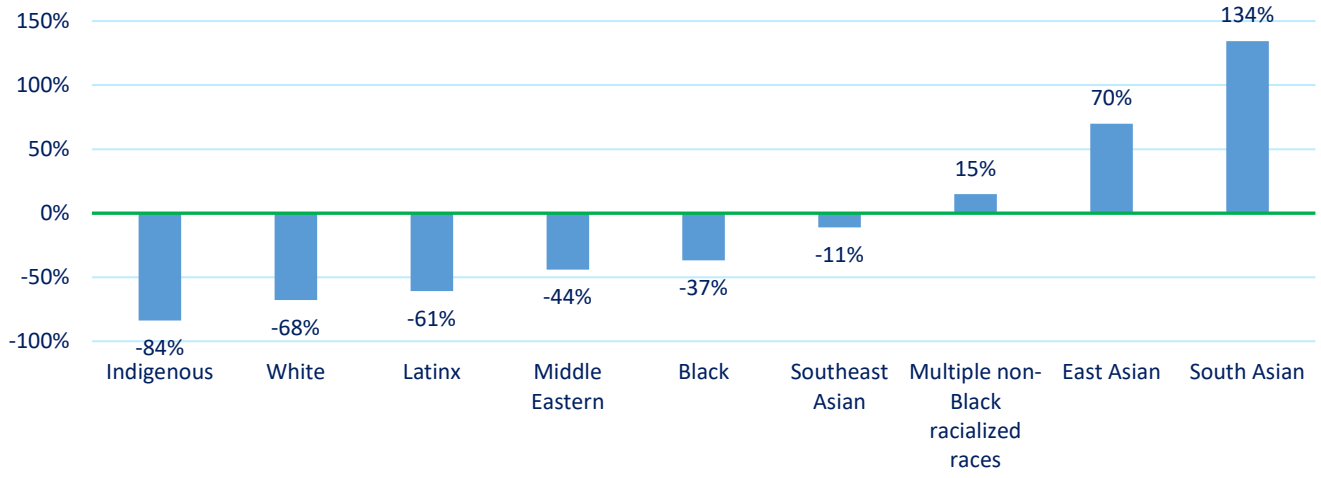
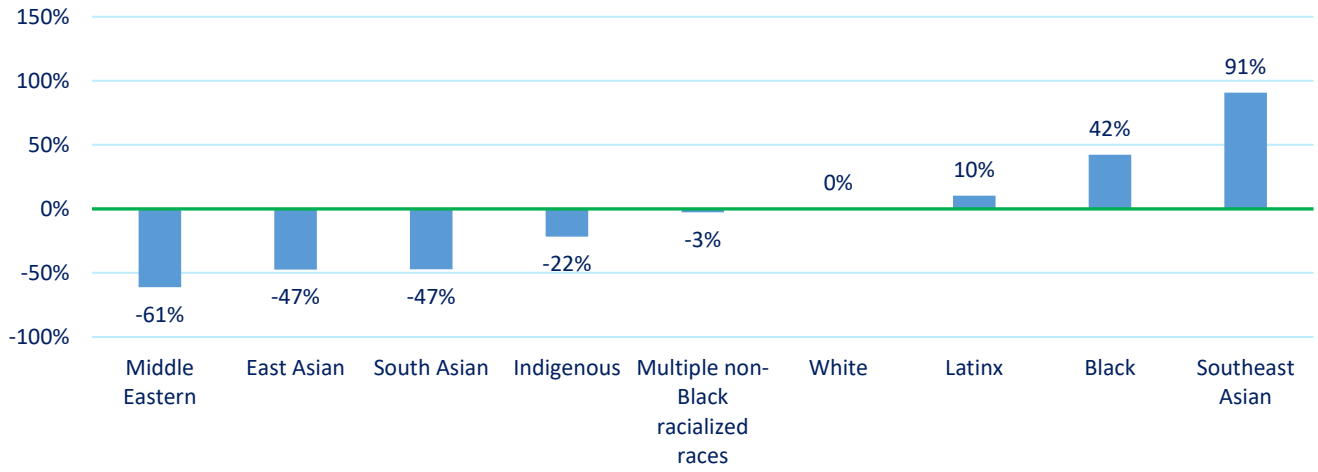


Figure 8: Disproportionality in Accessing Regional Arts Programming in Grades 9-12



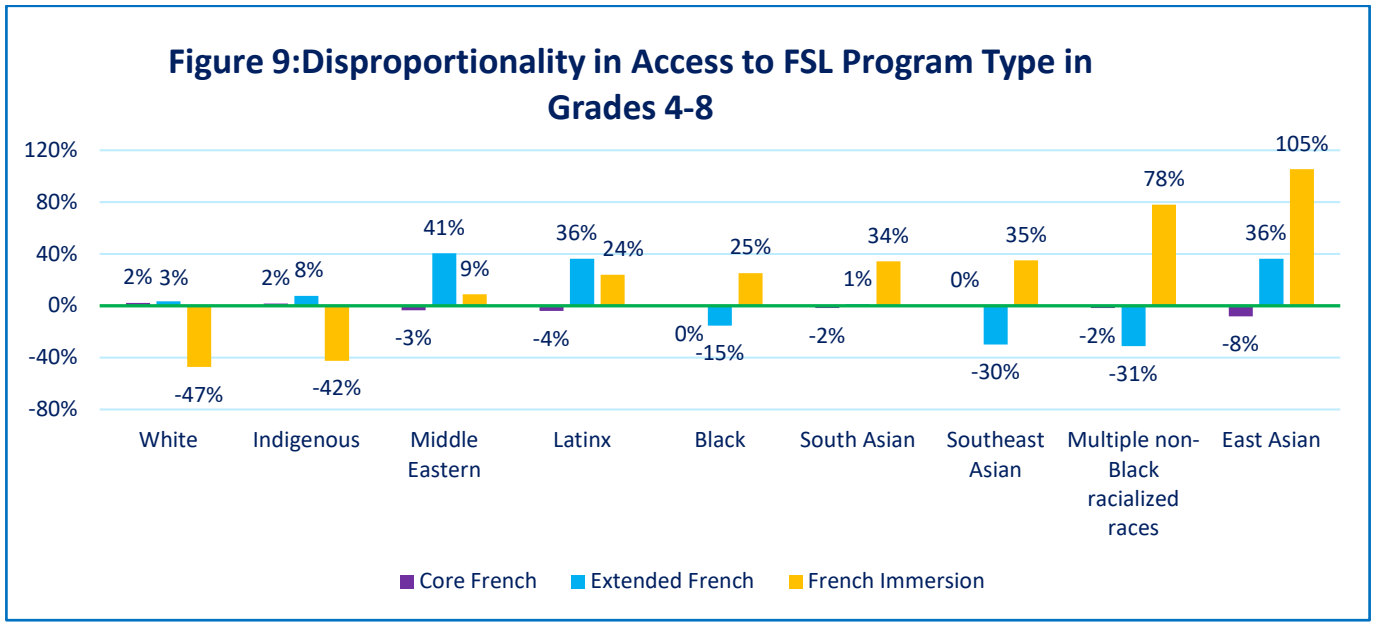
Access: French Language Learning

DPCDSB offers three types of French as a Second Language (FSL) learning programs: Core French, Extended French (EF), and French Immersion (FI). All students receive 40 minutes of Core French instruction per day in Grades 4 through 8, unless they are enrolled in EF or FI, in which case 50% of their instruction is delivered in French. In secondary grades, students must obtain one FSL credit for OSSD completion; most students complete this requirement by taking a Core French course in Grade 9. However, many students do not access FSL after they have satisfied their OSSD FSL requirement.

DPCDSB staff observed the following racial disproportionalities in access students in Grades 4 through 8:

- East Asian students and students reporting more than one non-Black racialized race were overrepresented by over 75% in French Immersion, compared to their respective populations in DPCDSB.
- On the other hand, Middle Eastern students, Latinx students, and East Asian students were overrepresented by 36% to 41% in Extended French.

Figure 9 (below) illustrates the differences in elementary FSL learning program by racial group.

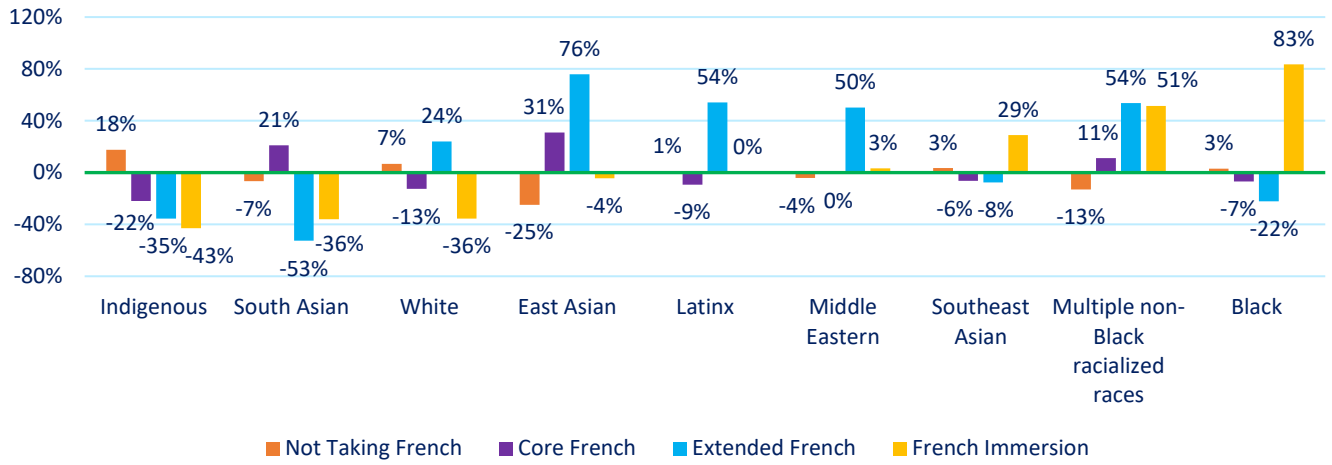


Staff also observed the following disproportionalities in FSL learning access among secondary students:

- Indigenous students were overrepresented among students no longer accessing any French language learning in secondary school.
- East Asian students and South Asian students were overrepresented in Core French.
- East Asian students, Latinx students, students reporting multiple non-Black racialized races, and Middle Eastern students were overrepresented in Extended French.
- Black students, students reporting multiple non-Black racialized races, and Southeast Asian students were overrepresented in French Immersion.

Figure 10 (below, following page) illustrates the racial disproportionalities related to secondary French language learning.

Figure 10: Disproportionality in Access to FSL Program Type in Grades 9-12



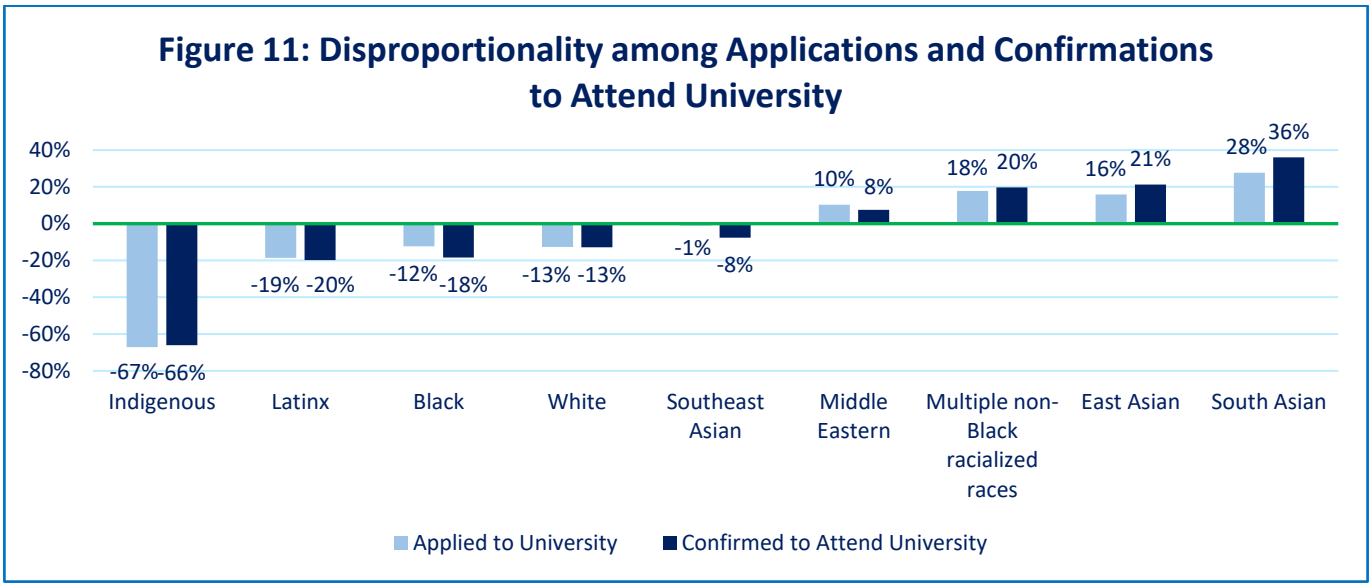
Access: Accessing University Programs

Data from the Ontario University Application Centre (OUAC) is readily available to school districts so that they can examine the programs and institutions to which their graduates apply and subsequently confirm to attend. Staff obtained and linked the 2021-2022 DPCDSB OUAC data to the census information to investigate access and confirmation to attend by racial group. **Note that this examination was not intended to prioritize the university post-secondary pathway**; instead, these data were used solely because they were available to staff. Data from the Ontario College Application System (OCAS) were not available for analysis, and tracking student access to trades and apprenticeship programs after secondary school is challenging. Regrettably, staff were only able to analyse data regarding university access.

Staff observed the following disproportionalities by race:

- South Asian students, East Asian students, students reporting more than one non-Black racialized race, and Middle Eastern students were overrepresented in application and confirmation to attend at least one university program compared to their corresponding populations in DPCDSB.
- All other racial groups were underrepresented in university access.

Figure 11 (below, following page) illustrates the disproportionalities observed for application and confirmation to attend university programs.

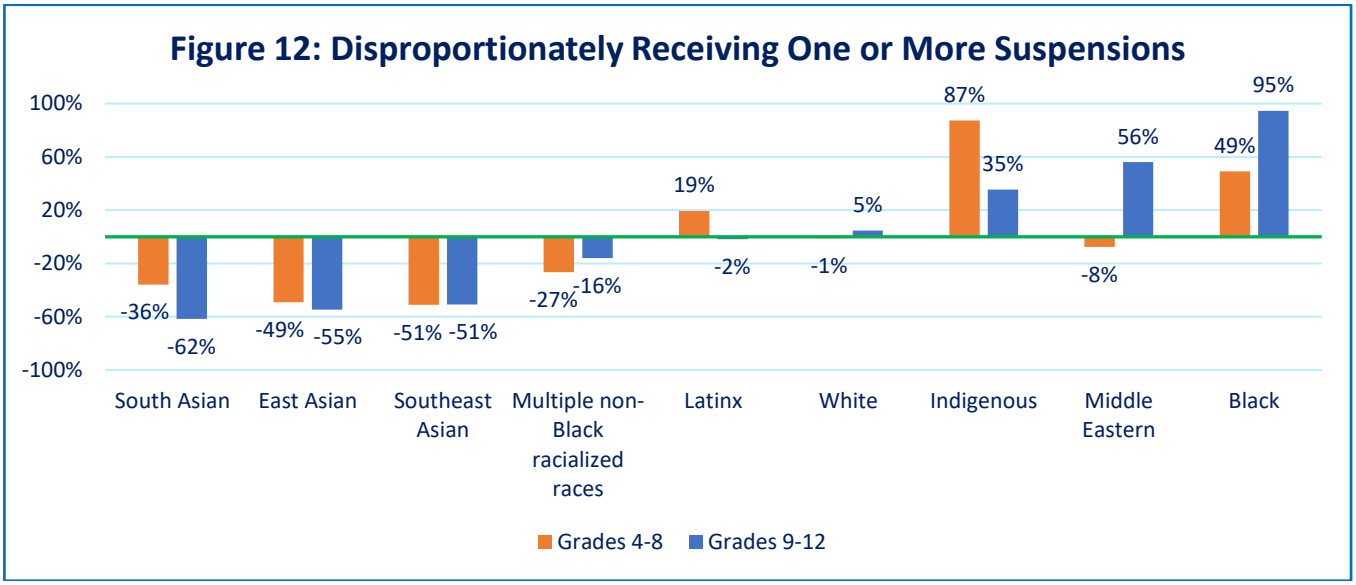


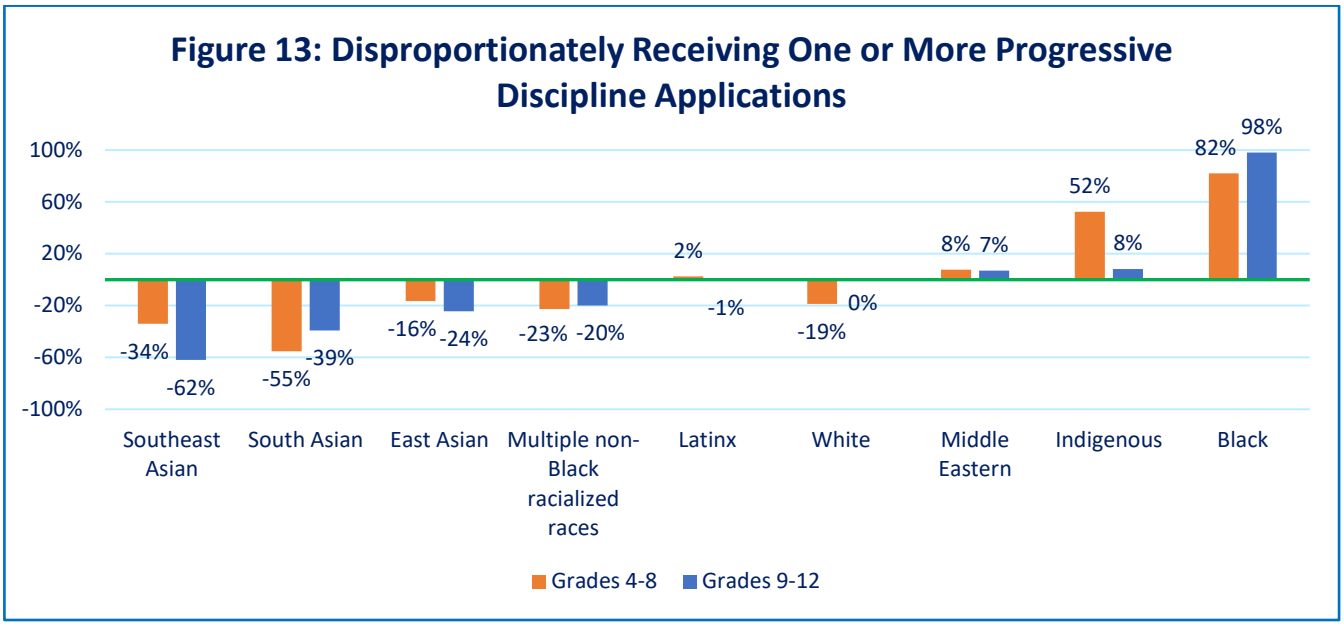
Disciplinary Sanctions

DPCDSB staff linked student census data with disciplinary information from the student information system to assess whether there were racial disproportionalities. Staff observed the following racial disproportionalities in the application of progressive discipline and number of suspensions:

- Black students were overrepresented at almost 100% more likely to receive progressive discipline in response to an incident.
- Black students were overrepresented by almost 100% more likely to receive a suspension.
- Middle Eastern students and Indigenous students were also overrepresented in the suspension data, compared to their respective populations.

Figures 12 and 13 (below and following page) illustrate the racial disproportionalities observed for progressive discipline and suspensions.





Racial Disparities: Context and the Disparity Indices

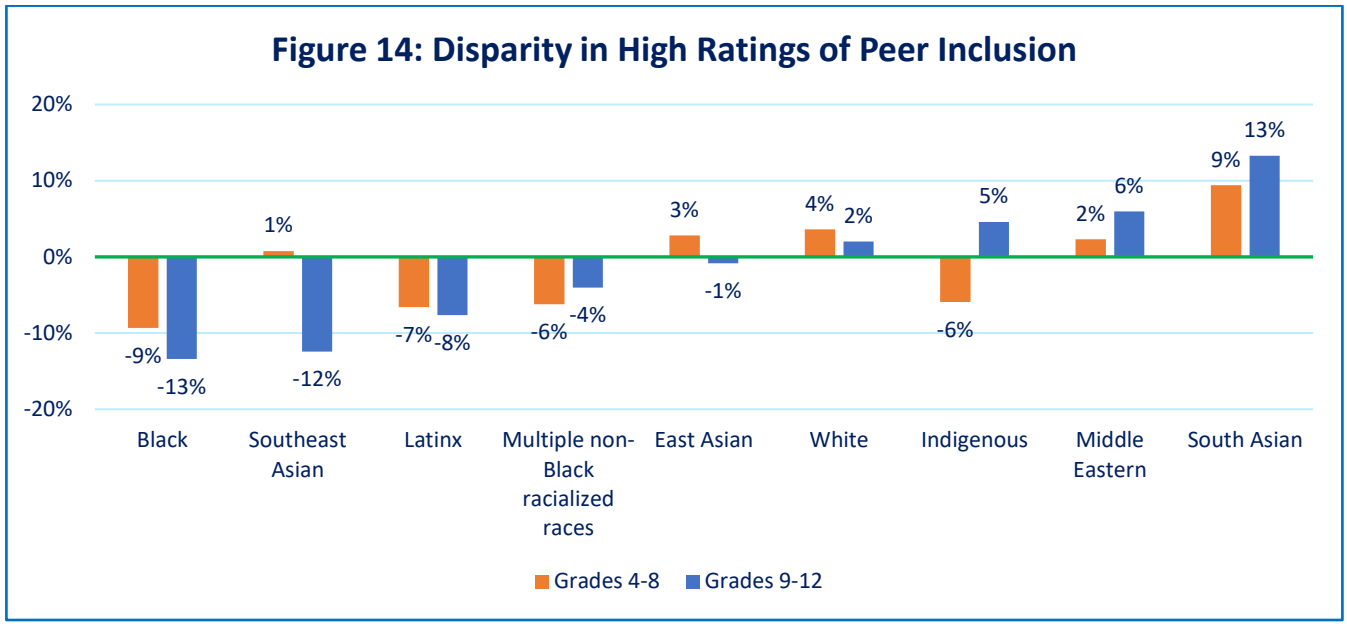
To examine the impact of colonialism and anti-Black racism on student attitudes, experiences, achievement, and attendance, it is more intuitive to look at racial disparities, rather than racial disproportionalities. Racial disparity indices measure differences between groups in terms of specific outcomes by comparing groups to a single reference population. Within the DPCDSB context, staff used disparity indices to examine differences in attitudinal outcomes, achievement in three core subject areas, EQAO and OSSLT achievement, credit accumulation, OSSD completion, and attendance. The benchmark population to which each racial group's outcomes were compared was the corresponding DPCDSB mean. This approach successfully illustrated overall patterns in disparities by outcomes while avoiding unintentional negative impacts of selecting one racial group as the benchmark against which all others were measured for each outcome. Each of the disparities examined by staff indicated where DPCDSB needs to focus its efforts to address and eliminate systemic racism. As with the disproportionality index, staff articulated the raw index scores as percentages. Percentages closer to zero indicated little to no disparity of outcome, while larger positive or negative percentages identified greater disparity.

Attitudes: Peer Inclusion

Peer inclusion items focus on student sense of belonging, specifically the impact of peers. This attitudinal outcome is assessed using DPCDSB's Peer Inclusion scale (see Table 6 on page 20 of the DPCDSB Technical Report for the individual items included in this scale). Staff observed the following notable (i.e., greater than 10% higher or lower than the DPCDSB rate) disparities for rates of high scores for peer inclusion among certain racial groups:

- South Asian students exhibited higher rates of high peer inclusion scores compared to the DPCDSB rate.
- Black students and Southeast Asian students had lower rates of high scores than the DPCDSB rate.

Figure 14 (below, following page) illustrates the disparity, if any, for each racial group in terms of rates of high peer inclusion scores.

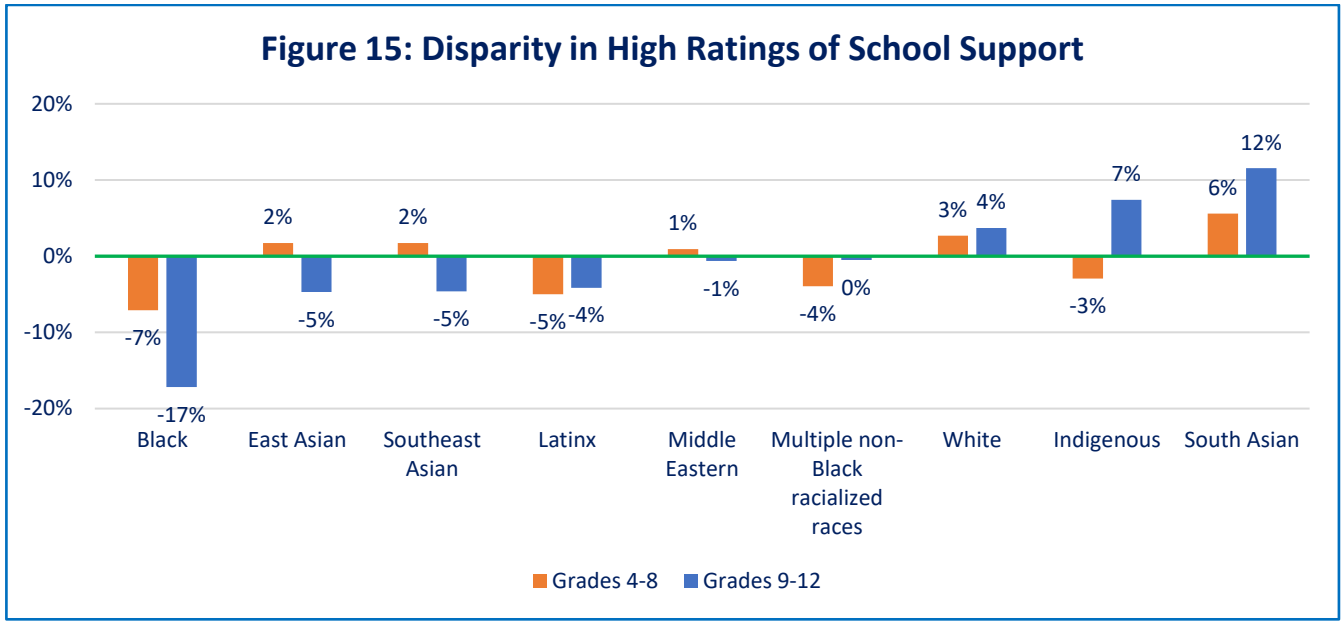


Attitudes: School Support

School support items focus on student sense of belonging in terms of the impact of adults at school. School support is assessed using DPCDSB's School Support scale (see Table 6 on page 20 of the Technical Report for the items that comprise the School Support scale). Staff observed the following disparities for school support among certain racial groups:

- South Asian students exhibited higher rates of high school support scores compared to the DPCDSB rate.
- Black students had lower rates of high scores than the DPCDSB rate.

Figure 15 (below) illustrates the findings related to high scores for school support.

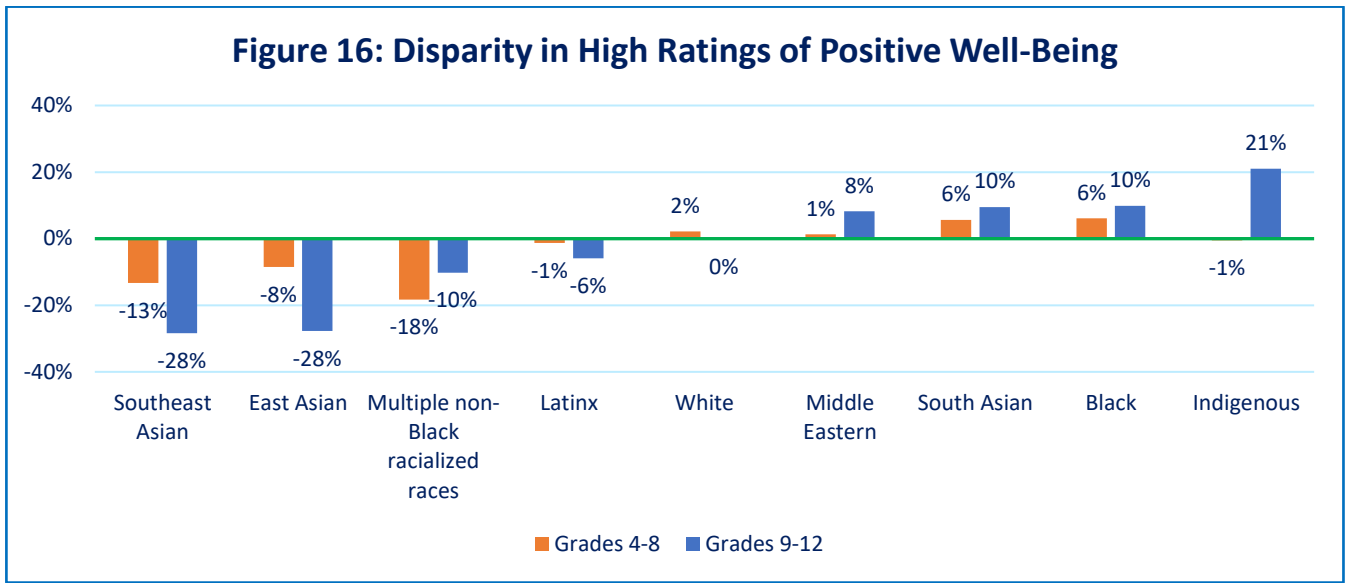


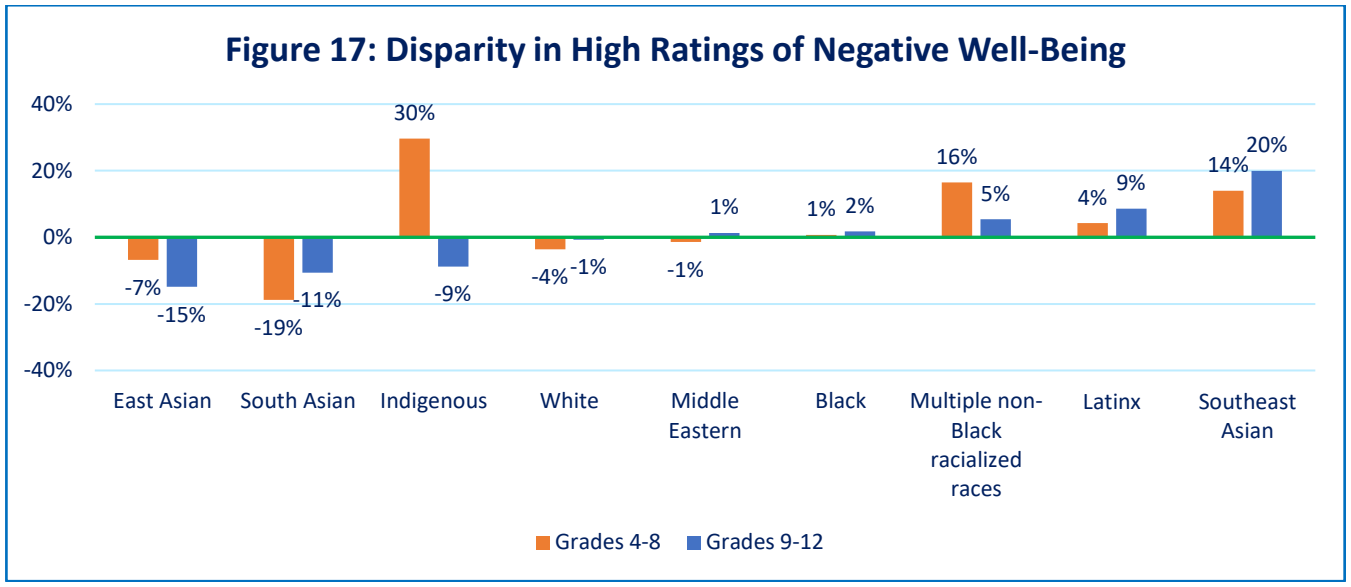
Attitudes: Emotional Well-Being

The DPCDSB census asked students to rate themselves on each of a group of positive and negative statements about emotional well-being. Analyses indicated that these statements formed two scales, namely a Positive Well-Being scale and a Negative Well-Being scale (see Table 8 on page 23 of the Technical Report for the positive and negative well-being items). Staff observed the following racial disparities:

- Indigenous students, Black students, and South Asian students had higher rates of high scores for positive well-being.
- Southeast Asian students and East Asian students had lower rates of high scores for positive well-being.
- Southeast Asian students also had higher rates of high scores for negative well-being.

Figures 16 and 17 (below) summarize racial disparities in positive and negative aspects of emotional well-being. Ideally, students would have high scores for positive well-being and low scores for negative well-being.





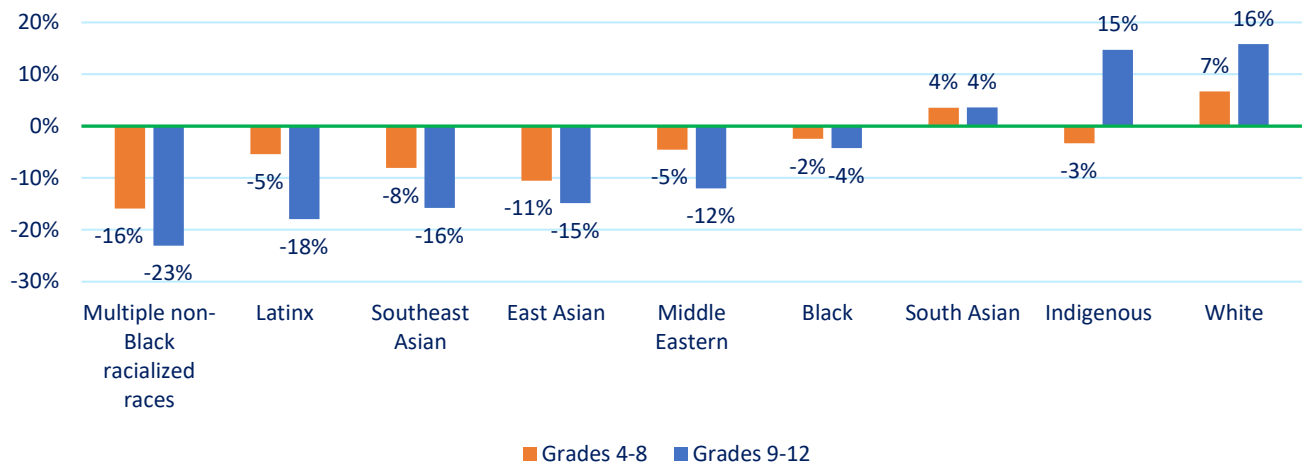
Attitudes: Positive Reflection of Identity at School

Another attitudinal item included on the DPCDSB census was student ratings of how often they felt their identity was positively reflected at school, through things like pictures and posters, displays of student work, class materials and resources, discussion topics, school publications, special events, guest speakers, and course offerings. Examination of high rates of positive reflection of identity at school demonstrated the following disparities:

- White students in Grades 4-12 and Indigenous students in Grades 9-12 had higher rates of scoring in the high category than DPCDSB.
- Racial groups with more than 10% lower rates of high scores for positive reflection of identity at school than for DPCDSB's corresponding rate of high scores included students reporting more than one non-Black racialized race, Latinx students, Southeast Asian students, East Asian students, and Middle Eastern students.

Figure 18, below, illustrates the disparities observed by staff.

Figure 18: Disparity in High Ratings of Seeing Identity Positively Reflected at School



Attitudes: Experience of Exclusion at School

The DPCDSB census asked students to rate how often they had felt excluded at school due to a variety of aspects of their identity, such as race, Indigenous identity, appearance, religion, abilities, and mental health. The optimal state for this scale is for students to have low scores, indicating lower experience of exclusion at school.

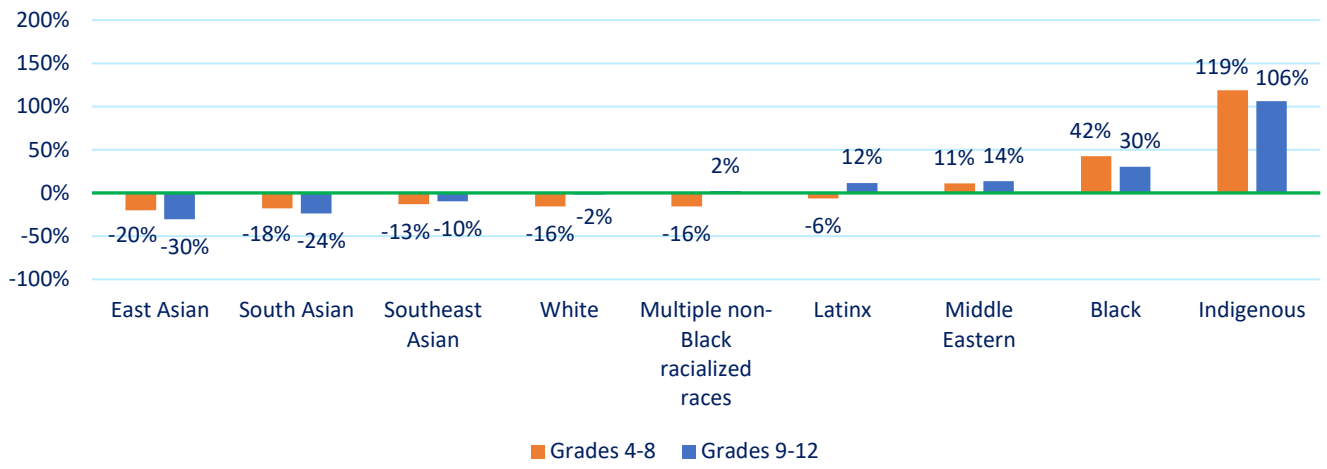
The racial disparity index yielded disparities in moderate to high experience of exclusion that exceeded plus or minus 10% of the DPCDSB rate for six of the nine racial groups:

- Indigenous students demonstrated over 100% higher rates of exclusion compared to all participating DPCDSB secondary students, followed by Black students, Middle Eastern students, and Latinx secondary students.

- East Asian students, South Asian students, Southeast Asian students, white elementary students, and elementary students reporting more than one non-Black racialized race had lower rates of exclusion than DPCDSB's corresponding rate.

Figure 19, below, summarizes visually these disparities.

Figure 19: Disparity in Moderate to High Experience of Exclusion at School



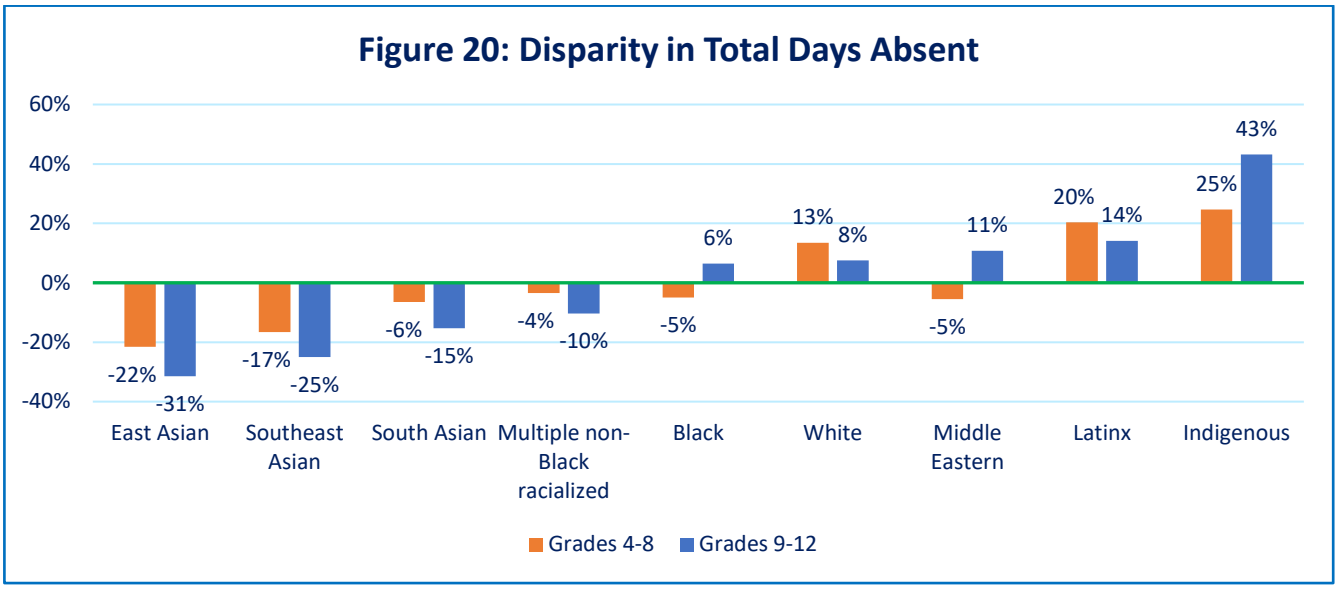
Attendance

Research has established the correlation between student absences and school outcomes, with one recent study reporting both achievement declines and longer-term impacts, such as delayed graduation and reduced likelihood to access post-secondary education, being observed among students with, on average, 10 absences in Grade 9 (Liu et. al., 2021). Furthermore, reduced absences have been observed to lead to improved achievement in math and reading scores (Aucejo & Romano, 2016).

Staff observed the following racial disparities of plus or minus 10% of the DPCDSB attendance benchmark:

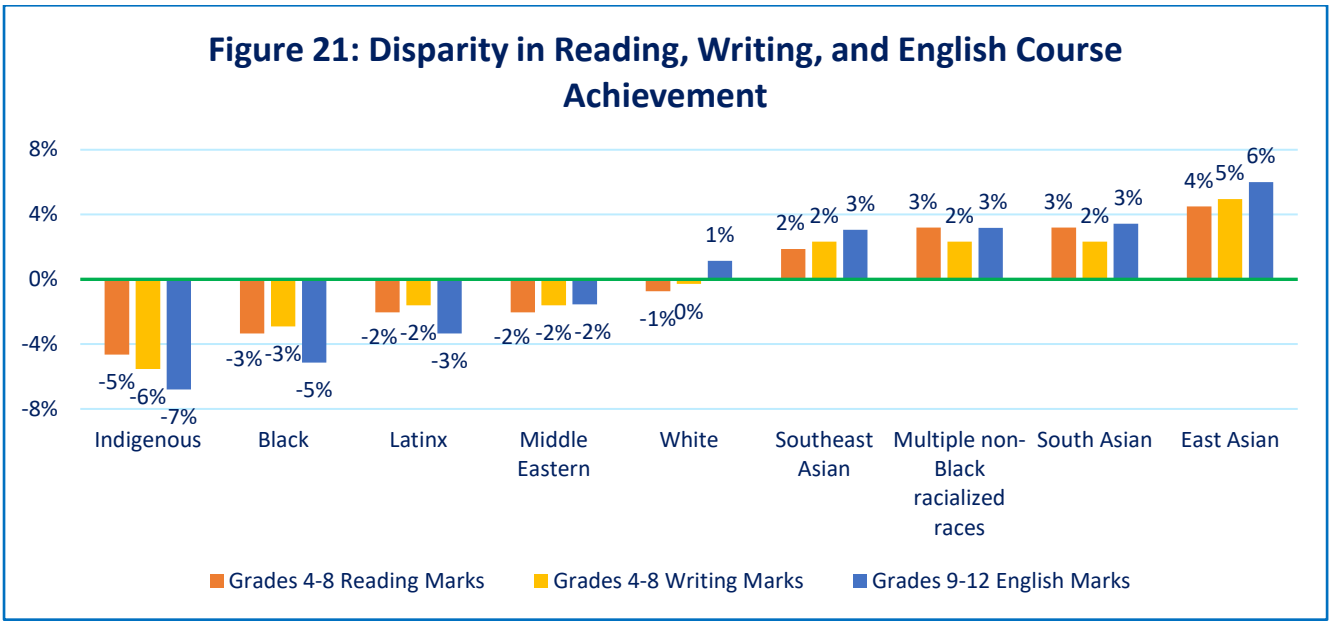
- Indigenous students demonstrated the highest absenteeism rates compared to the DPCDSB average rate.
- Latinx students and Middle Eastern secondary students also had higher absenteeism rates than the DPCDSB benchmark.
- East Asian students, Southeast Asian students, South Asian students, and students reporting more than one non-Black racialized race had consistently lower rates of absences, respectively, than the DPCDSB rate.

Figure 20 (following page) illustrates the disparities observed by racial group in terms of absences.



Achievement: Reading, Writing, and English

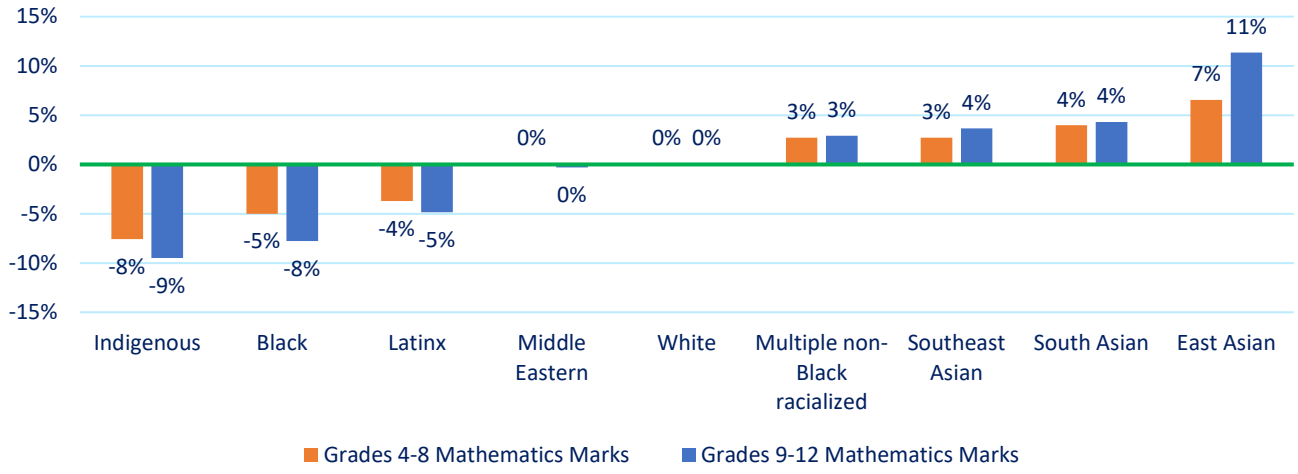
DPCDSB staff examined elementary reading and writing report card marks and English course achievement data for racial disparities. While staff observed differences by race in these marks, the disparities were small, with each at less than plus or minus 8% compared to the DPCDSB mean. Figure 21, below, illustrates these small disparities.



Achievement: Mathematics

Staff observed only one instance of racial disparities of at least 10% greater or less than the DPCDSB mathematics mark mean. That observation indicated that East Asian secondary students had 11% higher mathematics achievement compared to the mean DPCDSB mark. In contrast, Indigenous students, Black students, and Latinx students, consistently received somewhat lower mean marks in mathematics than the DPCDSB average. Figure 22 (below) summarizes the racial disparities observed for mathematics achievement.

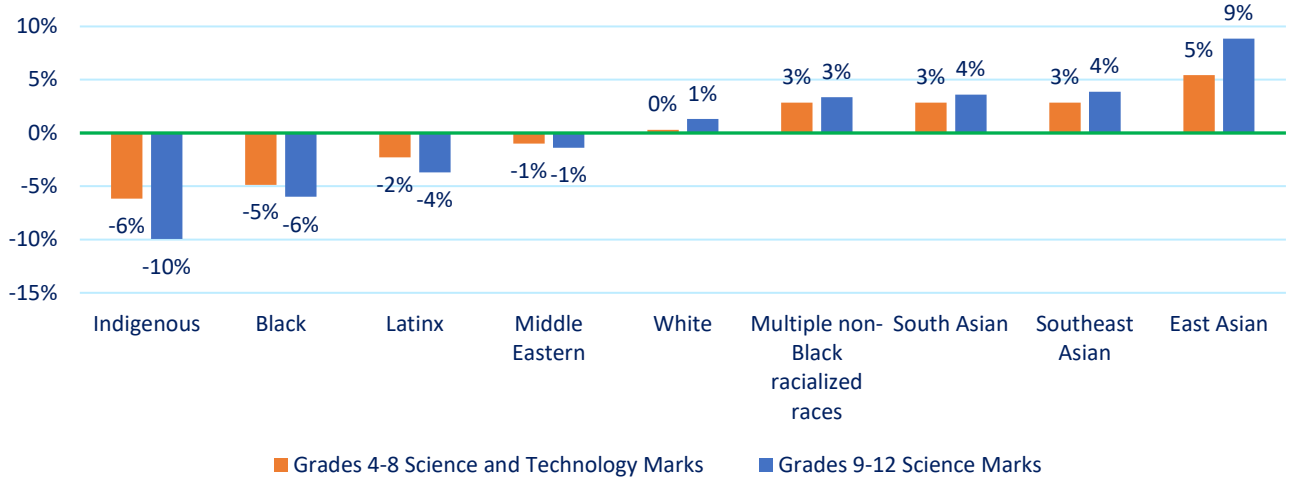
Figure 22: Disparity in Mathematics Achievement



Achievement: Science

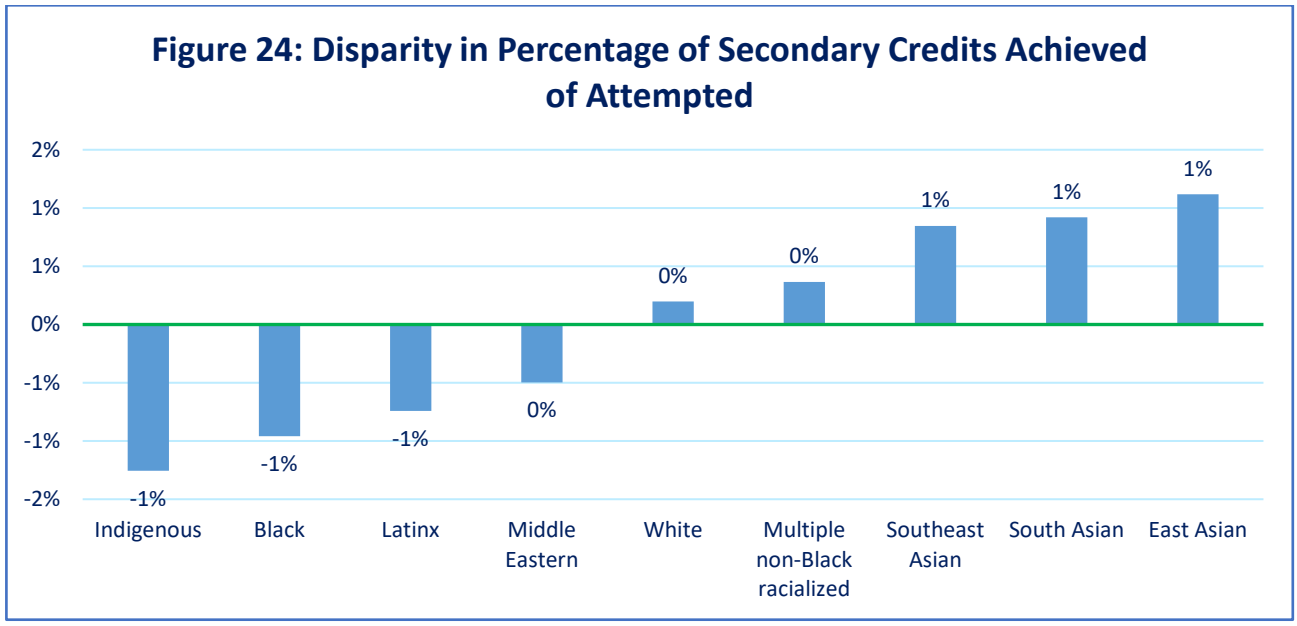
DPCDSB staff examined science achievement data for racial disparities. Findings indicated that Indigenous students, Black students, and Latinx students received science marks that were, on average, lower than the DPCDSB mean for this subject area. These disparities were slightly greater in secondary school. Figure 23 (below) illustrates the racial disparities seen in science achievement.

Figure 23: Disparity in Science Achievement



Credit Attainment

Staff examined secondary student credit completion rates, in terms of the percentage of credits achieved out of those attempted by students, to determine if there were racial disparities. While staff did detect differences in these data, disparities were very small at only about 1% greater or less than the DPCDSB credit completion rate. Figure 24 (below) illustrates the findings.



EQAO and OSSLT Achievement

Ontario's Education Quality and Accountability Office (EQAO) implements standardized assessments of mathematics and literacy annually at certain key points in students' Kindergarten through Grade 12 education. EQAO assessments of reading, writing, and mathematics occur at the end of Grades 3 and 6. At the secondary level, the EQAO assessment of Grade 9 mathematics assesses students' understanding, thinking, and application of mathematics learning. Attainment of Level 3 or 4 is categorized as meeting or exceeding the provincial standard on EQAO assessments in Grades 3, 6, and 9. In terms of secondary literacy, EQAO administers the Ontario Secondary School Literacy Test (OSSLT) to students in Grade 10. Successful completion of this test is one of the requirements of the OSSD.

Staff examined Grades 6 and 9 EQAO assessment data and OSSLT success rates for racial disparities. The following disparities were noted:

- Indigenous students and Black students were assessed as meeting or exceeding the provincial standard in Grade 6 EQAO Reading and Writing at rates at least 7% lower than the DPCDSB rate.
- Indigenous students, Black students, and Latinx students were assessed as meeting or exceeding the provincial standard in Grade 6 EQAO Mathematics at rates from 19% to almost 60% lower than the DPCDSB rate.
- Latinx students, Black students, and Indigenous students were assessed as meeting or exceeding the provincial standard in Grade 9 EQAO Mathematics at rates from 20% to 31% lower than the DPCDSB rate.

- Staff observed racial disparities of less than 10% greater or less than the DPCDSB benchmark success rate for the OSSLT. This observation is similar to the smaller levels of racial disparity seen in elementary reading and writing and secondary English marks, perhaps because of the focus on English language literacy in each of these outcomes.

Figures 25, 26, 27, 28, and 29 (below and following pages) illustrate the disparities in assessment at Level 3 or 4 on the Grades 6 and 9 EQAO assessments and the OSSLT.

Figure 25: Disparity in Achievement of Level 3 or 4 in Grade 6 EQAO Reading

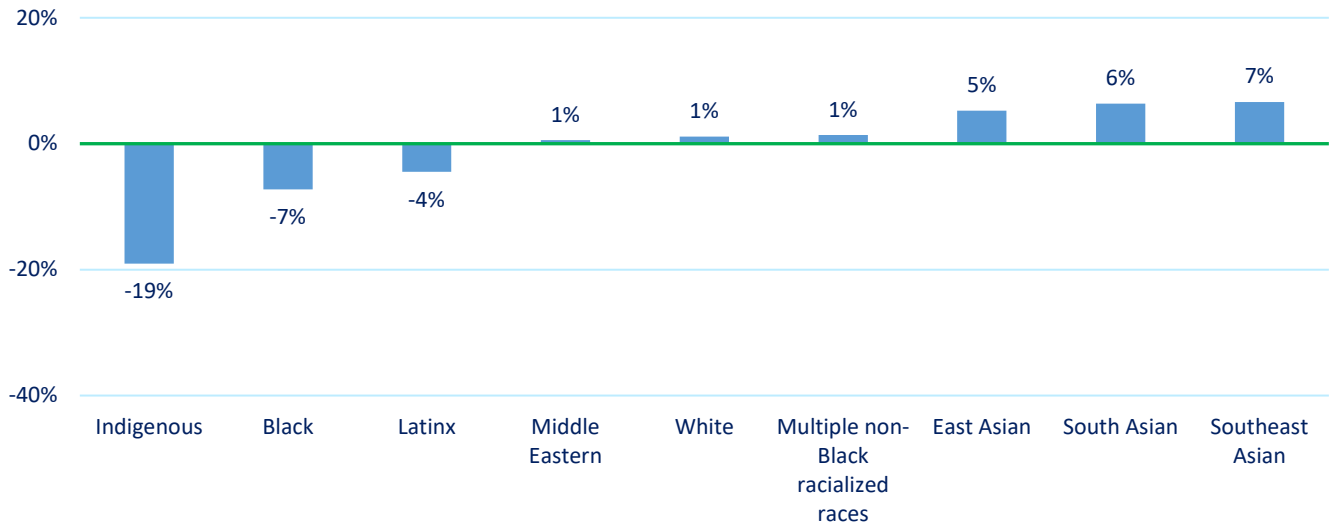


Figure 26: Disparity in Achievement of Level 3 or 4 in Grade 6 EQAO Writing

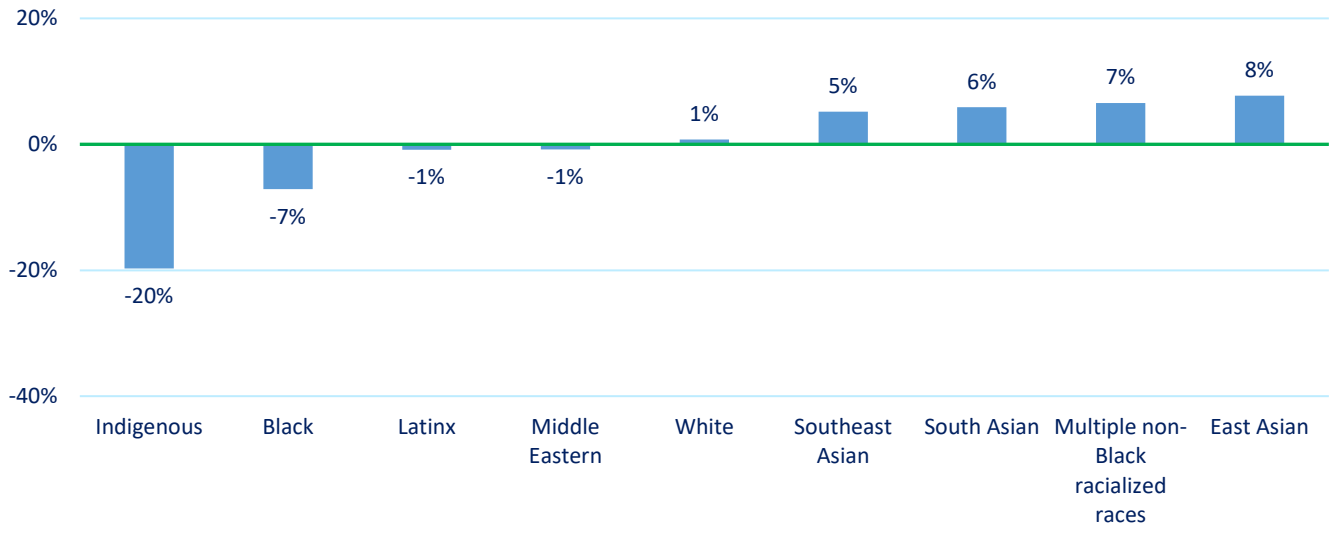


Figure 27: Disparity in Achievement of Level 3 or 4 in Grade 6 EQAO Mathematics

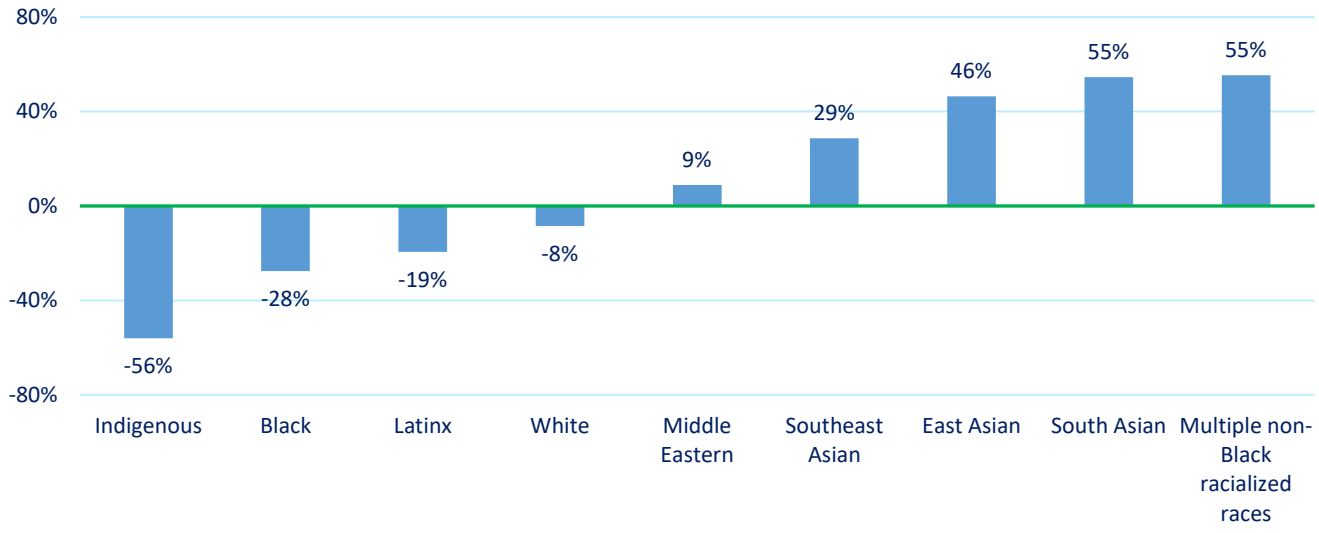
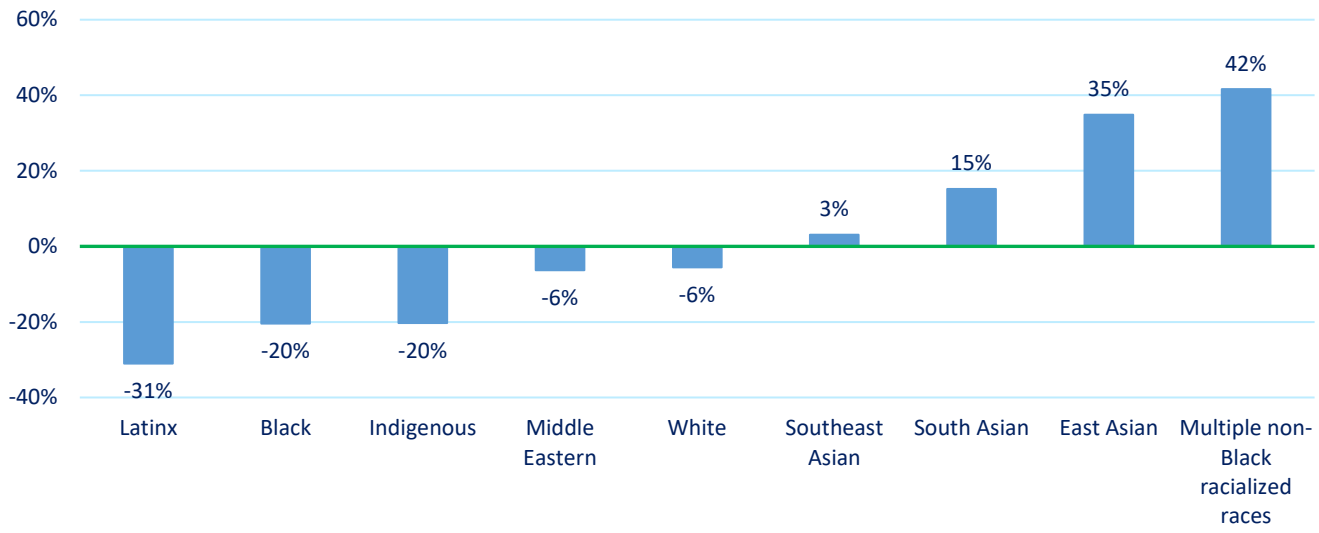
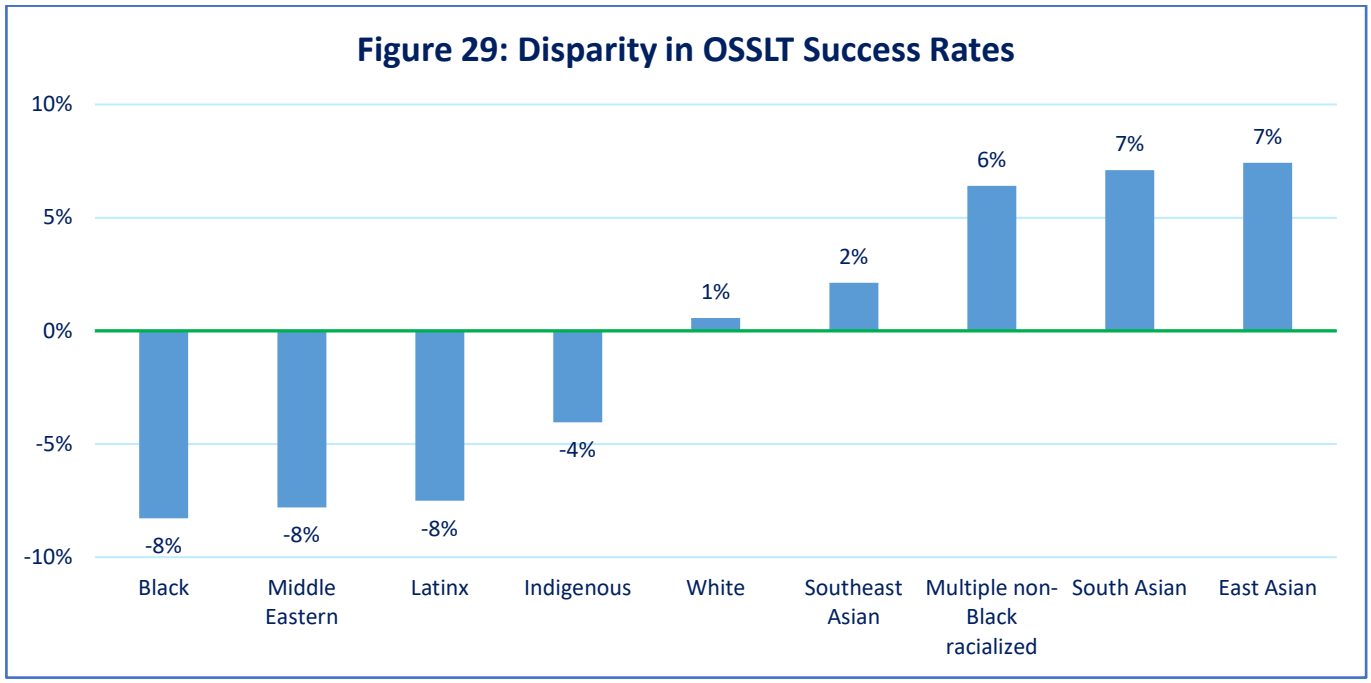


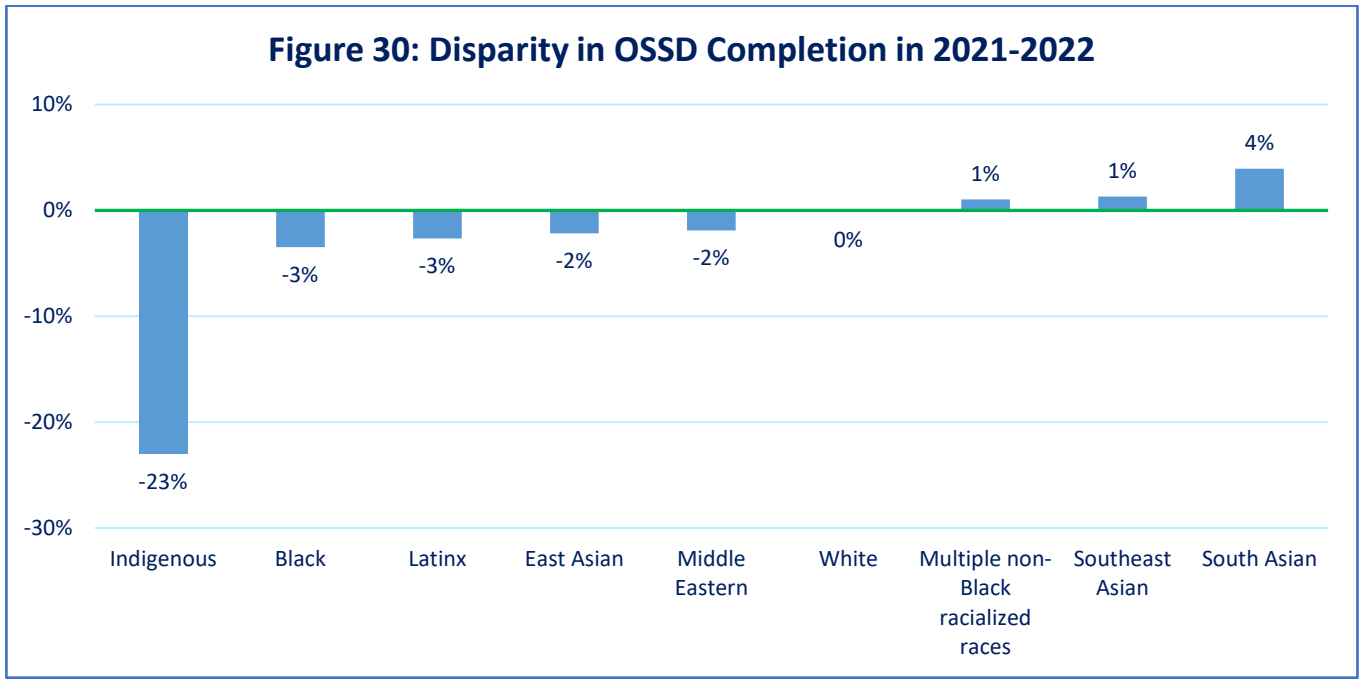
Figure 28: Disparity in Assessment at Level 3 or 4 in Grade 9 EQAO Mathematics





OSSD Completion

The final measure staff assessed for racial disparities was the completion of the OSSD by Grade 12 students in 2021-2022. In general, staff observed very small disparities of less than plus or minus 4% of the DPCDSB OSSD completion rate for all groups except Indigenous students. Indigenous students completed their OSSDs in 2021-2022 at a rate of 23% less than the rate for DPCDSB in the same academic year. However, it is important to note that students may attend Year 5 to complete all OSSD requirements. Therefore, it is possible that some students were still working on obtaining their OSSD after 2021-2022 concluded. Figure 30, below, shows racial disparities in OSSD completion in 2021-2022.



Discussion and Implications

Findings from the 2021-2022 DPCDSB Student Census have indicated that DPCDSB is a highly diverse school district in terms of first languages learned, ethnicities, racial groups, and religious affiliation. Analyses focused on racial disproportionalities and disparities illustrated clear trends in terms of differentiated student experiences. Generally, Black students, Indigenous students, and, to a lesser extent, Latinx students faced a greater degree of negative disproportionalities and disparities compared to the DPCDSB population. On the other hand, East Asian students, South Asian students, and students reporting more than one non-Black racialized race experienced disproportionately better access and more positive outcomes compared to DPCDSB benchmarks. The observation of racial disproportionalities and disparities suggest systemic racism and discrimination are present and need to be addressed effectively to ensure equitable access and outcomes.

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Aucejo, E. M. & Romano, T. F. (2016). Assessing the effect of school days and absences on test score performance. *Economics of Education Review*, 55(2016):70-87. https://doi.org/10.1016/j.econedurev.2016.08.007.

Liu, J., Lee, M., & Gershenson, S. (2021). The short- and long-run impacts of secondary school absences. *Journal of Public Economics, Volume 199*, 2021, 104441, https://doi.org/10.1016/j.jpubeco.2021.104441.