

The Collapse of Student Testing in BC High Schools

Participation rates plummet as student achievement wanes

Paige MacPherson and Joel Emes

Summary

- Standardized testing in the education system is a tool critical for the fair and objective measurement of student academic performance. British Columbia has historically led the country in standardized testing, but recent and significant changes have dismantled BC's province-wide high school testing regime.
- Participation in BC's student assessments is considered mandatory for graduation, yet student participation in those assessments has dropped even as BC's graduation rate has increased.
- In recent years, government public schools have seen sharper drops in student test-writing than have independent schools.
- In 2021/22, participation in BC's grade 10 literacy assessment among both public and independent schools was 17.1 percentage points lower compared to the 2015/16 grade 10 English exams.
- In 2021/22, participation in BC's grade 10 numeracy assessment was 22.3 percentage points lower than the grade 10 math exams of 2015/16.
- In 2021/22, participation in BC's grade 12 literacy assessment was 14.2 percentage points lower than the grade 12 English exams of 2015/16.
- In 2021/22, proficiency on BC's grade 10 literacy assessment was 4.1 percentage points lower than on the 2015/16 exams. About three-quarters of grade 10 students were proficient in literacy in 2021/22.
- In 2015/16, six in 10 of BC's grade 10 students were proficient in math. By 2021/22, less than half of BC's grade 10 students were proficient in numeracy.
- In 2015/16, proficiency on BC's grade 12 literacy assessment was 2.0 percentage points higher than the grade 12 English exams of 2015/16. Eight in ten grade 12 students are now proficient in literacy.

Introduction

Standardized tests are a critical tool that parents, students, teachers, school administrators, and policymakers can use to clearly understand how students are performing academically. Currently in British Columbia high schools the province conducts student assessments in literacy and numeracy in grade 10 and literacy in grade 12. Previously, BC used course knowledge-based *exams* that were marked with a clear percentage grade by which to fairly and objectively measure students in grades 10 and 12. These exams were mandatory for course completion—and the completion of those courses was required for graduation; students' exam grades contributed to their final course marks. Starting in 2017/18, the shift to student *assessments*, which no longer employ broadly understandable percentage grades but rather are evaluated using terms like “emerging” or “proficient,” began to make BC's province-wide assessment program less clear and less meaningful for students and schools. The new assessments are “mandatory” for graduation—yet the share of students writing province-wide assessments has dropped. Furthermore, students' outcomes on these assessments don't matter for course marks or graduation.

Immediately after the new student assessments were implemented, participation rates became significantly lower than they had been for the course-based exams—despite the fact that the student assessments were “mandatory” for graduation. Despite their flaws, the student assessments revealed declining student performance.

The decline in participation in student assessments marks a downturn in the quality of BC's student performance data, and therefore in the public understanding of how BC students are doing academically. The drop in student performance reveals a concerning trend—that

the academic success of BC high school students is declining—which suggests that fair, objective, and accurate student testing may be more necessary than ever if schools are to help BC students improve.

This bulletin compares BC student participation rates in the grade 10 2015/16 math and English¹ exams and the grade 12 English exams with the 2021/22 grade 10 numeracy and literacy assessments and the grade 12 literacy assessment; the decline in the proportion of students writing these assessments is clear. Further, the bulletin details student proficiency in the aforementioned exams: grade 10 literacy and numeracy proficiency is lower than it was in 2015/16 while grade 12 literacy is slightly higher. Finally, the paper compares student participation and proficiency by school type—independent schools versus government public schools—and finds that in a comparison of the 2015/16 exams with the 2021/22 assessments, student test-writing dropped more in government public schools than in independent schools across all three assessments. Further, from 2015/16 to 2021/22 there were greater proficiency declines in government public schools in grade 10 math or numeracy and in grade 10 English or literacy, and a smaller increase in grade 12 English or literacy proficiency in government public schools compared to independent schools.

Participation

Both the previously used exams in grades 10 and 12, and the new grade 10 and 12 student assessments, are “mandatory” according to British Columbia's Ministry of Education and Child Care (Undated a). In both cases, students were, and are, required to complete these tests if they are to graduate. Students can write the grade 10 assessments in grade 11 and 12, and retake them

1 References to “English” courses and exams throughout this paper are inclusive of all previously mandatory Language Arts exams in grades 10 and 12, including English, English: First Peoples, and Français Langue Première.

if necessary, though though the tests are intended to be taken in grade 10. Participation in the literacy and numeracy assessments in grades 10 and 12 is significantly lower compared with participation in the previous exams, which all had a participation rates of 100 percent given that their completion was required for students to complete their respective course (MacPherson and Emes, 2022).² Importantly, student assessments in grade 10 and 12 are said to be “mandatory” for graduation, yet participation in these assessments has declined, while graduation rates have not. In 2015/16, BC’s “eligible to graduate” rate was 95 percent and in 2021/22, the rate was 96 percent (Government of British Columbia Education Analytics Office, Undated).³ This raises the question of whether the provincial definition of “mandatory” has changed, resulting in a weakened testing regime.

In 2015/16, grade 10 students participated in course-based exams in math and English, and grade 12 students participated in a course-based exams in English, which were mandatory for both course completion and graduation. Their grades on these tests contributed to their final course grades, making them meaningful exams for students. In 2017/18, the BC government replaced the math exam graduation requirement with a numeracy assessment, which was still required for graduation

(although as will be detailed in this paper, their student participation rate has declined), but students’ grades on this assessment is inconsequential to their final grade and graduation. In 2017/18, the BC government replaced the grade 10 English exam graduation requirement with the grade 10 literacy assessment—again, “required” for graduation, but with student grades being inconsequential. Following the same parameters, in 2019/20 the grade 12 English exam was replaced with the grade 12 literacy assessment.

Examining the participation rates of students at all BC schools,⁴ participation in the grade 10 literacy assessment in 2021/22 was 82.9 percent of grade 10 students—17.1 percentage points lower than the 2015/16 grade 10 English exams.⁵ Similarly, participation in the grade 10 numeracy assessment was 77.7 percent of students—22.3 percentage points lower than the 2015/16 grade 10 math exams (figure 1).⁶ On the grade 12 literacy assessment, looking at all schools,⁷ participation was 85.8 percent in 2021/22, 14.2 percentage points lower than in 2015/16.⁸

Across all three student assessments, inclusive of all students, both government public schools and independent schools saw a decline in participation, but there was a larger drop in participation in government public schools. In other words, a greater share of students in

2 2015/16 participation rates are 100 percent because if a student didn’t write the exam, they didn’t receive credit for the course, and the marks were not recorded in the ministry’s tracking system.

3 In 2021/22, the graduation rate was 96 percent. The rate was 95 percent from 2015/16 to 2016/17 and rose to 96 percent in 2017/18, where it remained through 2021/22, the latest year of available data.

4 In 2015/16, British Columbia had 150 independent (standard) schools (with grade 10 students) and 279 public (standard) schools (with grade 10 students). In 2021/22, BC had 147 independent (standard) schools (with grade 10 students) and 292 public (standard) schools (with grade 10 students).

5 Combined 2015/16 exam results (English 10, English 10 First Peoples, and Français Langue Premiere 10) compared with the 2021/22 grade 10 literacy assessment results. Based on data from the BC Ministry of Education and Childcare.

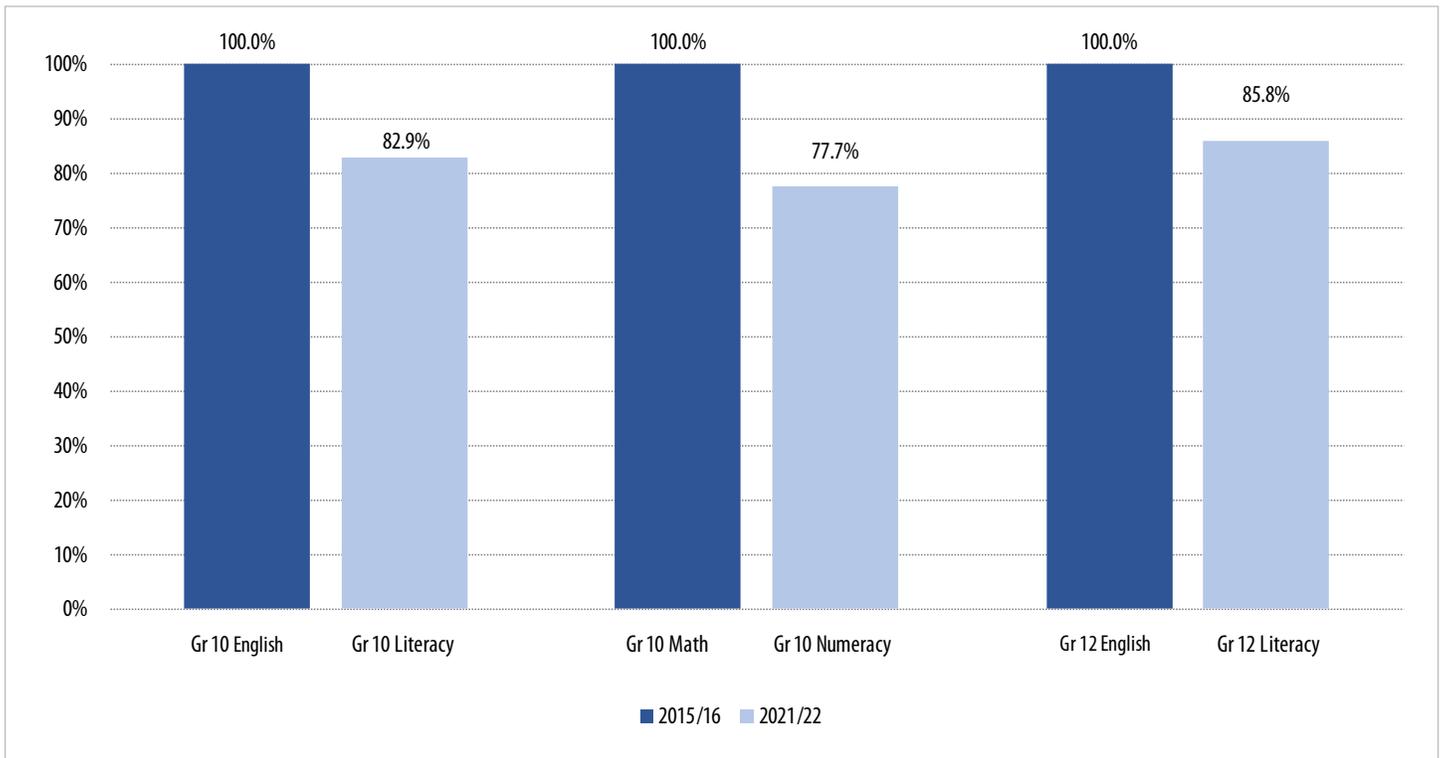
6 Combined 2015/16 exam results (Foundations of Math and Pre-Calculus 10 and Apprenticeship and Workplace Math 10) compared to the 2021/22 grade 10 numeracy assessment results. Based on data from the BC Ministry of Education and Childcare.

7 In 2015/16, BC had 143 independent (standard) schools (with grade 12 students) and 275 public (standard) schools (with grade 12 students). In 2021/22, BC had 148 independent (standard) schools (with grade 12 students) and 276 public (standard) schools (with grade 12 students).

8 Combined 2015/16 exam results (English 12, Communications 12, English 12 First Peoples, and Français Langue Premiere 12) compared to 2021/22 grade 12 literacy assessment results.

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Figure 1: High School Student Participation in BC 2015/16 Exams vs 2021/22 Assessments (All Students)



- Notes:
- 1) Proficiency measures are not directly comparable between the years because the 2015/16 exams and 2021/22 assessments use different evaluation criteria. We have made them as comparable as possible.
 - 2) 2015/16 participation rates are 100% because if a student didn't write the exam they didn't receive credit for the course and the marks were not recorded in the ministry's tracking system.
 - 3) In calculating assessment participation we used all students for number of writers and enrolments in "Standard" schools.

Sources: British Columbia, Ministry of Education and Child Care (Undated b, c, d, e).

government public schools are not writing the student assessments compared to independent schools.

On the grade 10 literacy assessment, in government public schools there was an 82.0 percent participation rate—18.0 percentage points lower than participation in the 2015/16 exams. In independent schools over the same period there was an 89.9 percent participation rate—10.1 percentage points lower than in 2015/16 (figure 2).

On the grade 10 numeracy assessment, government public schools saw a 76.7 percent participation rate—23.3 percentage points lower than the 2015/16 exams. In

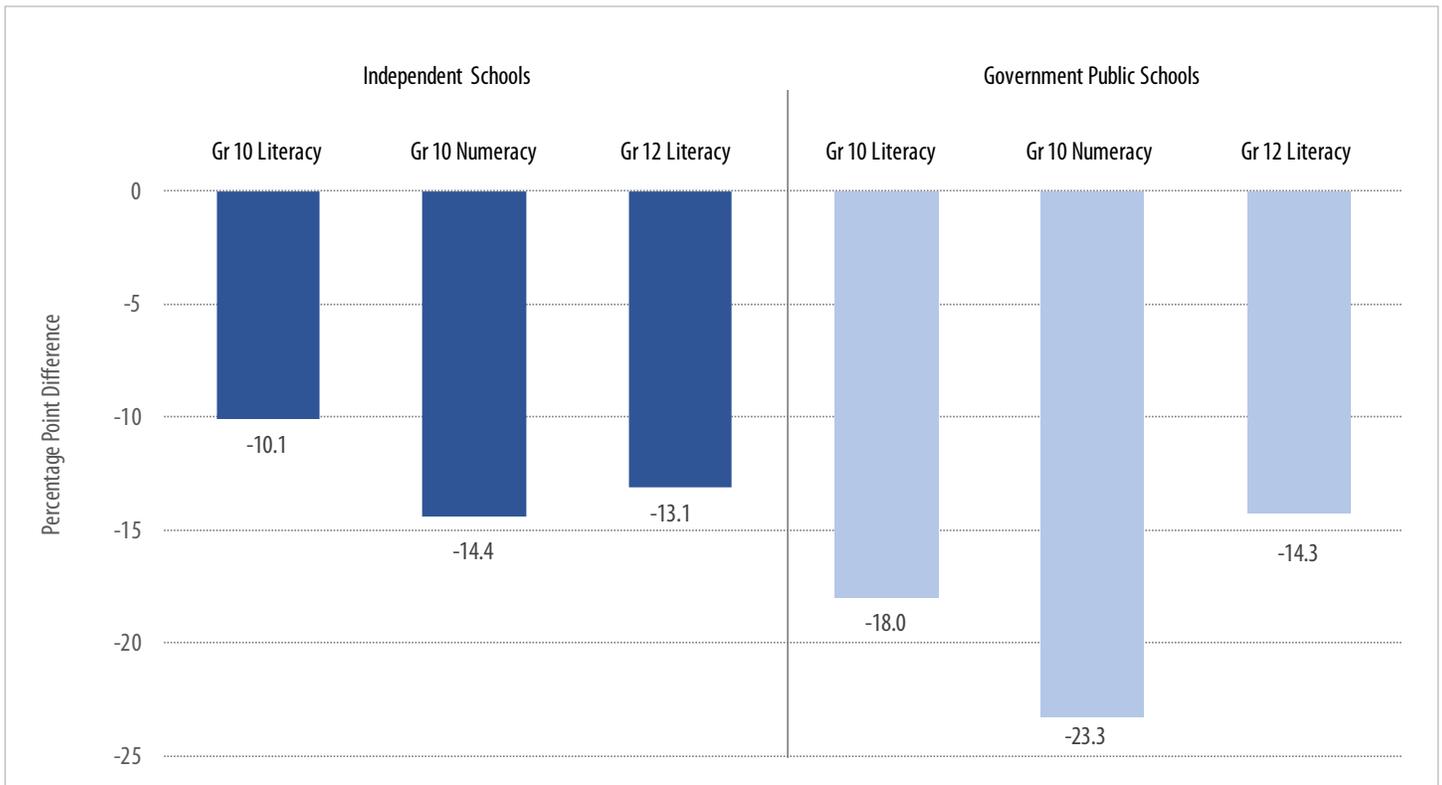
independent schools over the same period there was an 85.6 percent participation rate—14.4 percentage points lower (figure 2).

On the grade 12 literacy assessment, government public schools saw an 85.7 percent participation rate—14.3 percentage points lower than the 2015/16 exams. In independent schools over the same period there was an 86.9 percent participation rate—13.1 percentage points lower (figure 2).

Participation in province-wide assessments is mandatory for a reason. To assess student and school

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Figure 2: BC Student Participation Differences: 2015/16 Exams and 2021/22 Assessments



- Notes:
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 - 2) 2015/16 participation rates are 100% because if a student didn't write the exam they didn't receive credit for the course and the marks were not recorded in the ministry's tracking system.
 - 3) In calculating assessment participation we used all students for number of writers and enrolments in "Standard" schools.

Sources: British Columbia, Ministry of Education and Child Care (Undated b, c, d, e).

performance by fair and objective measures, broad participation in the tests is critical in order to provide a comparative basis of performance and achievement. Participation in the assessments should be enforced. Two external factors may have decreased student participation in 2021/22:

- 1) While 2021/22 was not a school year affected by COVID-19 government school closures, some schools may still have been affected by some individual students continuing to learn virtually from home that year, and some students and

teachers may have been more likely than usual to stay home due to illness.

- 2) The student assessments were still somewhat new in 2021/22. The grade 10 numeracy assessment was introduced in 2017/18 and the grade 10 literacy assessment was introduced in 2019/20. Some schools could still have been in the process of rolling out these assessments, creating participation gaps. However, the numeracy assessment—rolled out three years prior—had even lower participation than the grade 12

literacy assessment introduced in 2020/21. As such, “growing pains” associated with the assessment rollout certainly does not explain the full participation deficit.

A look back at 2021/22 student participation rates in the grade 10 assessments illustrates why these potential explanations are insufficient.⁹ The school year most affected by school closures in the province was 2019/20 when BC schools closed from the spring to the summer of 2020. As such, participation on the grade 10 literacy assessment increased significantly from 2019/20 to 2020/21, from 50.0 percent to 83.5 percent. Similarly, participation in the grade 10 numeracy assessment increased from 46.1 percent to 80.3 percent (MacPherson and Emes, 2022; British Columbia, Ministry of Education and Child Care, Undated b and d). This could suggest that participation declines were a temporary blip. However, if that were true, one would expect participation in student assessments to increase steadily in the years following the COVID-19 school closures. That is not the case. Compared to 2020/21, participation in the BC grade 10 literacy and numeracy assessments declined: on the literacy assessment, from 83.5 percent in 2020/21 to 82.9 percent in 2021/22, and on the numeracy assessment, from 80.3 percent in 2020/21 to 77.7 percent in 2021/22 (British Columbia, Ministry of Education and Child Care, Undated b and d).

A declining share of students writing province-wide tests every year means every year we have a less clear picture of student and school performance in British

Columbia. Following prolonged COVID-19 school closures, which research shows left many students with learning loss, it’s important to have a clear picture of students’ academic proficiency (MacPherson and Green, 2023). If we don’t know how students are doing, we won’t know how to help them improve.

Proficiency

Lower proficiency in the grade 10 literacy and numeracy assessments underscore the need to help students improve. Comparing the 2015/16 English exam¹⁰ results with the 2021/22 grade 10 literacy assessment results shows that proficiency is 4.1 percentage points lower (figure 3).¹¹ This is not a comparison of exactly the same tests because of the provincial government shift from grade 10 math and English exams to grade 10 numeracy and literacy assessments. However, both are intended to demonstrate how academically proficient grade 10 students are in these core subject areas. In 2021/22, eight in 10 grade 12 students in BC were considered to be proficient in literacy, which is higher than the 2015/16 proficiency (figure 3).

Yet on the grade 10 numeracy assessment, proficiency was 14.2 percentage points lower in 2021/22 than on the 2015/16 grade 10 math exam.¹² In 2021/22, grade 10 proficiency in numeracy in BC was 48.2 percent. In other words, in 2015/16, six in 10 grade 10 students in BC were proficient in math, but by 2021/22, less than

9 2021/22 was the first reporting year of data for the grade 12 Literacy assessment.

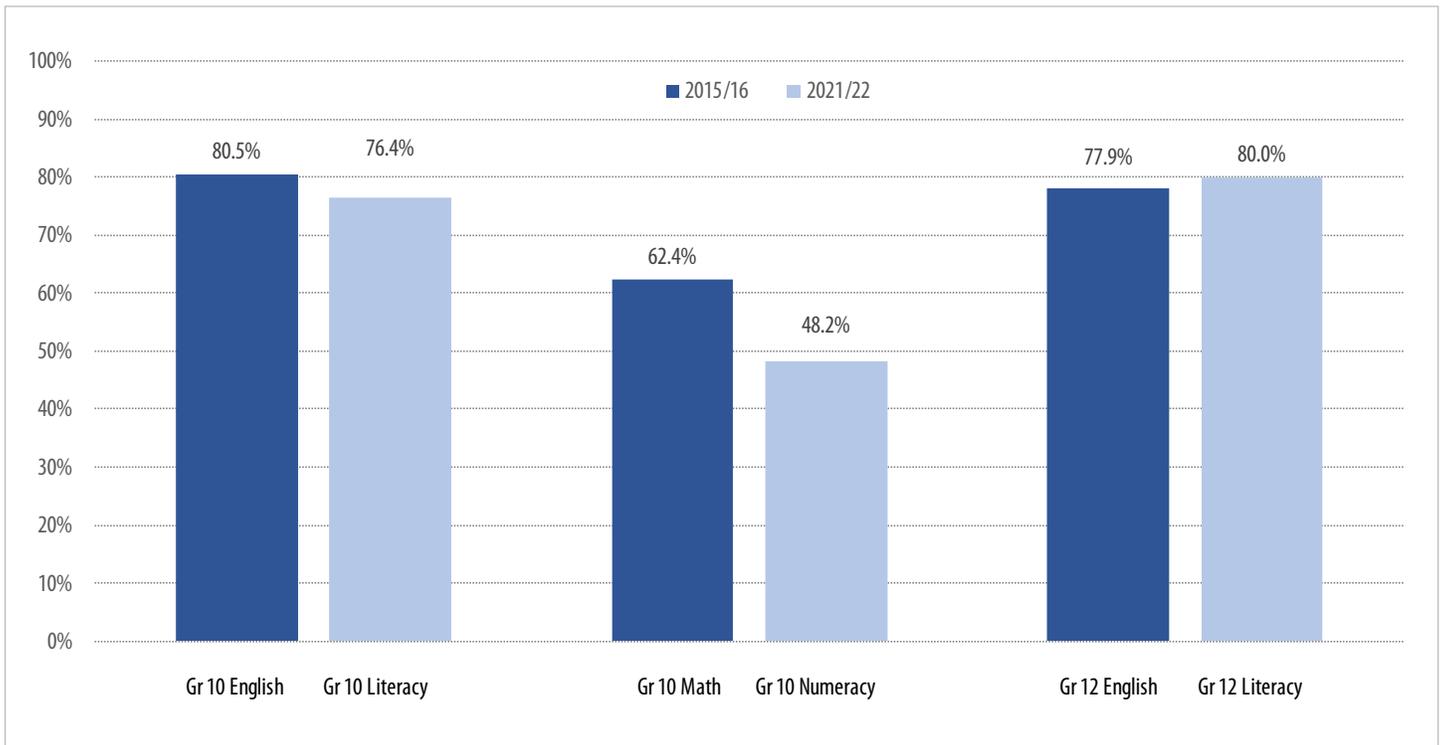
10 Combined 2015/16 exam results (English 10, English 10 First Peoples, and Français Langue Première 10).

11 Proficiency measures are not directly comparable between the years because the 2015/16 exams and 2021/22 assessments use different evaluation criteria. The 2015/16 BC exams were marked using letter grades, while the new student assessments are marked using a scale of “emerging, developing, proficient, or extending.” We have made them as comparable as possible, using the following scale: 2015/16 exam grades between F and C- are considered “emerging” or “developing” on 2021-22 student assessments, and grades between C and A+ are considered proficient or extending. In other words, proficiency in the 2015/16 exams is defined as the number of students with a grade of C or better divided by the number of writers. Proficiency in the 2021/22 assessments is defined as the number of students deemed “proficient” or “extending” divided by the number of writers.

12 Combined 2015/16 exam results (Foundations of Math and Pre-Calculus 10 and Apprenticeship and Workplace Math 10).

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Figure 3: BC High School Student Proficiency on 2015/16 Exams vs. 2021/22 Assessments, All Students



- Notes:
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 - 2) 2015/16 participation rates are 100% because if a student didn't write the exam they didn't receive credit for the course and the marks were not recorded in the ministry's tracking system.
 - 3) In calculating assessment participation we used all students for number of writers and enrolments in "Standard" schools.

Sources: British Columbia, Ministry of Education and Child Care (Undated b, c, d, e).

half of grade 10 students in the province were considered proficient at working with numbers.

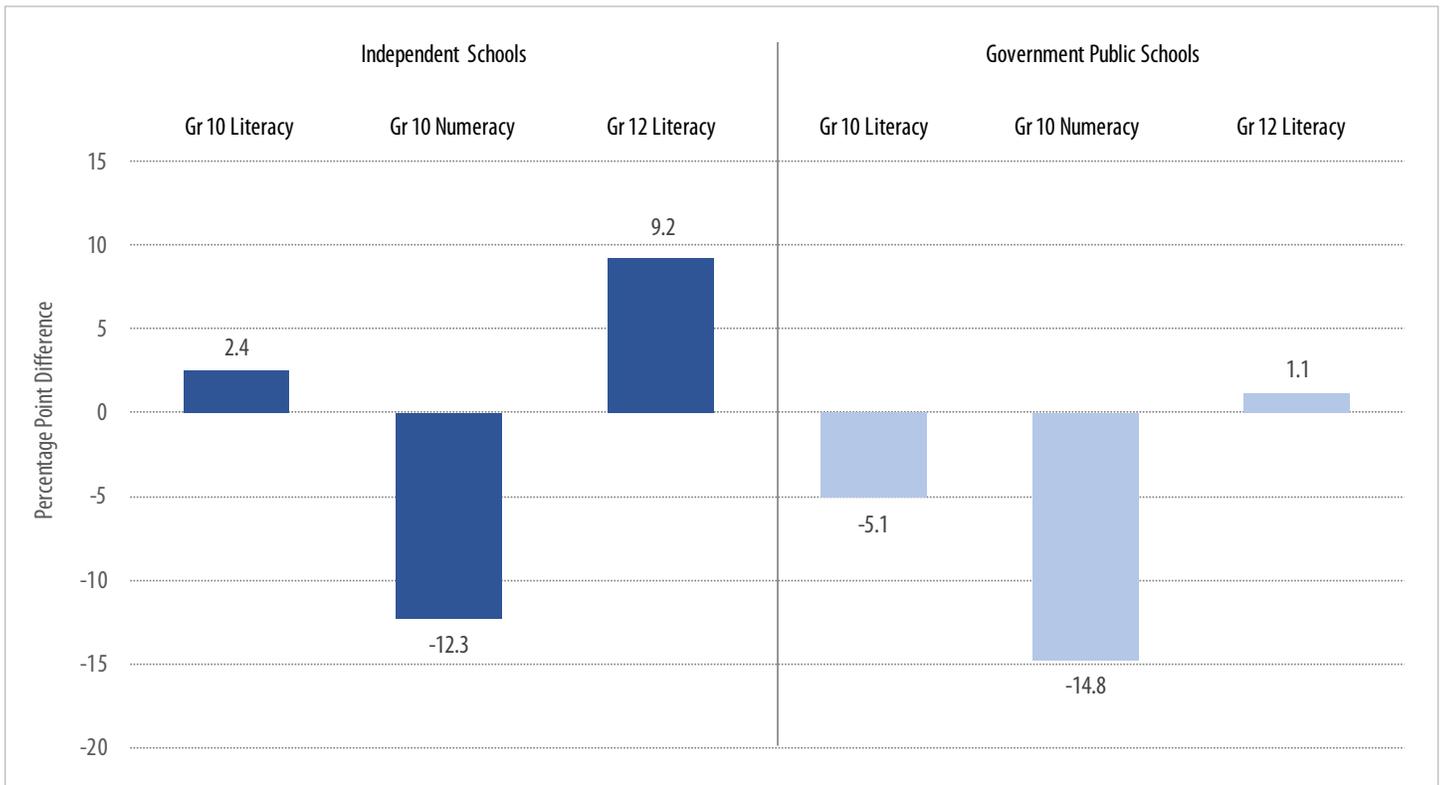
A breakdown by type of school, namely, government public schools and independent schools, shows that grade 12 literacy assessment results were 9.2 percentage points higher than the 2015/16 exam proficiency in independent schools, and that government public school proficiency was 1.1 percentage points higher. In 2021/22, 78.6 percent of grade 12 government public school students were proficient, and 90.9 percent of

grade 12 independent school students were proficient in literacy (figure 4).

In grade 10, independent school students had higher proficiency scores and less concerning trends overall. On the 2021/22 grade 10 literacy assessment, compared to the 2015/16 English exams, proficiency was 2.4 percentage points higher in independent schools and 5.1 percentage points lower in government public schools (figure 4). In other words, independent school student performance in grade 10 literacy improved modestly,

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Figure 4: Change in Student Proficiency in BC on 2015/16 Exams vs. 2021/22 Assessments



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- 1) Proficiency measures are not directly comparable between the years because the 2015/16 exams and 2021/22 assessments use different evaluation criteria. We have made them as comparable as possible.
 - 2) 2015/16 participation rates are 100% because if a student didn't write the exam they didn't receive credit for the course and the marks were not recorded in the ministry's tracking system.
 - 3) In calculating assessment participation we used all students for number of writers and enrolments in "Standard" schools.

Sources: British Columbia, Ministry of Education and Child Care (Undated b, c, d, e).

while government public school student performance in grade 10 literacy declined. In 2021/22, 89.7 percent of independent school students were considered proficient in literacy, versus 87.2 percent in 2015/16—compared to 74.6 percent of government public school students in 2021/22, versus 79.8 percent of students in 2015/16.

When comparing the 2021/22 grade 10 numeracy assessment to the 2015/16 math exam, independent

school proficiency was 12.3 percentage points lower and government public school proficiency was 14.8 percentage points lower (figure 4). In 2021/22, 65.2 percent of independent school students were considered proficient in numeracy compared to 77.6 percent in 2015/16. This is in contrast to 45.9 percent of government public school students who were considered proficient in 2021/22 versus 60.6 percent on the 2015-16 exams.

Conclusion

Understanding how students are performing academically is critical to helping them improve before they complete high school. Yet with the shift from course-based math and English exams in grade 10 and English exams in grade 12 to broader student literacy and numeracy assessments, student participation in BC's province-wide high school tests has plummeted. These assessments are considered mandatory for graduation by the Ministry, though students are given the opportunity to write and rewrite the grade 10 assessments in grades 11 and 12. Participation of grade 10 students in the grade 10 assessments has declined, as

has participation of grade 12 students in the grade 12 assessments. Despite this decline, BC's graduation rate increased between 2015/16 and 2021/22, rather than declined. The fewer students who write province-wide assessments the more difficult it becomes for parents, the provincial government, school administrators, and teachers to draw from quality data to understand how BC students and schools are doing academically.

Based on the results of the students who did write the assessments, grade 10 proficiency in the two core subject areas has declined across the board, while grade 12 literacy has improved marginally. Independent school students continue to have higher shares of proficient students in both numeracy and literacy.

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Acknowledgments

The authors extend their thanks to the Lotte and John Hecht Memorial Foundation for supporting this project. They also wish to thank the anonymous reviewers for their suggestions and feedback. Any remaining errors or omissions are the sole responsibility of the authors. As the researchers have worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, and its supporters.

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ISSN 2291-8620

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