

## Preliminary Findings on the Impact to Learning Due to the Pandemic

This report focuses on potential impacts on learning outcomes in Kindergarten to Grade 12 that have occurred as a result of the disruption to public education in the Toronto District School Board (TDSB) and many parts of the world due to COVID-19. This report represents a preliminary discussion on the impacts on learning using two important data sets:

1. Grade 1 reading data; and
2. Secondary school report card data.

The purpose of this report is to provide the Board with a preliminary analysis to inform direction, resources, and strategy in relation to learning in 2021-22, and to ensure that the TDSB benefits from any new capacity and practices gained through working digitally over the course of this year. This preliminary analysis comes ahead of a more complete evaluation that will consider a variety of indicators from Kindergarten through Grade 12 as well as integrate perceptions from students, parents, and staff planned for June 2021.

### ***Jurisdictional comparisons and factors contributing to the impact on learning:***

While far from certain, there are some patterns that are emerging in relation to learning impact due to COVID-19 that are worth considering in this discussion. Grade averages, credits, and marks are varied across jurisdictions in both Canada and the United States. Jurisdictions have set different policies during the pandemic that may have affected how teachers approach summative assessments and grading in general. Many jurisdictions are experiencing an increase in failure rates (Alphonso & Perreux, 2021; Strauss, 2020) while others are reporting an increase in proportions reaching higher grade averages. New York, Los Angeles, and the TDSB established policies and communications with direction for schools to balance feedback on learning with concern for student mental health during the pandemic (Goldstein, 2020).

Some higher education institutions are also reporting higher Grade Point Averages (GPAs) than pre-COVID. This may be due to extensions of deadlines for assignments, abandoning penalties for late work and lessening the amount of assignments due at the end of term as a result of students struggling with unemployment, extra caregiving, poor or no internet service at home, no access to libraries or tutoring services, etc. (Flaherty, 2020).

In addition, assessment and learning in the virtual environment is different than in person. While there are less available social inputs in virtual learning, there are also a variety of different virtual platforms and opportunities to demonstrate learning. However, it is important to note that student perception data from a recent survey of 36,000 TDSB students, indicates that 84% of Grade 6 to 12 students felt that they learn more in person than virtually, suggesting that a clear understanding of the impacts on learning as a result of the pandemic is complex (TDSB, 2021).

In secondary schools, culminating activities designed to provide opportunities for students to demonstrate understanding of course content now include a broader range of possibilities. While also, in the TDSB, final exams have been reduced to very few or none during the pandemic. These differences may have influenced the shifts in marks and grade percentages that have occurred since the pandemic began.

Equally, much of these results are impacted by inequities in economic and social circumstances amongst TDSB students due to both differentiated access to resources and opportunities. An analysis of demographic circumstances of students in relation to relative potential impacts to learning are not a part of this report but will be a critical part of the larger analysis in the summer.

***Considerations for the shift in classroom and learning context:***

The jurisdictional contexts just discussed in this report highlights some of the negative impacts that have occurred due to the pandemic and disruptions to public education service. Like the TDSB, the impacts on learning are not straightforward. Important to this discussion is a brief consideration of what is lost in a virtual learning environment in relation to learning and assessment. Statistics on failure rates and grade percentage shifts do not, in isolation, provide for a contextual consideration of the qualities of assessment that are available in person and that which are more difficult to access in a virtual learning environment.

Over the past 40 years, it has been well documented that students' feelings about themselves as learners, their enjoyment of learning, and their willingness to engage in learning are closely associated with their teachers' professional skills—both in differentiating instruction and assessment, and in helping students understand how they can improve (e.g., Black and Wiliam, 2001).

Growing Success (2010) articulates the role of the teacher in student assessment in the following way:

*Teachers create environments in which all students feel valued and confident and have the courage to take risks and make mistakes. In their important professional role, teachers show*

*students that they care about them, and model a love of learning that can deeply influence their lives. Teachers' professional judgements are at the heart of effective assessment, evaluation, and reporting of student achievement. (Growing Success, 2010, p. 8)*

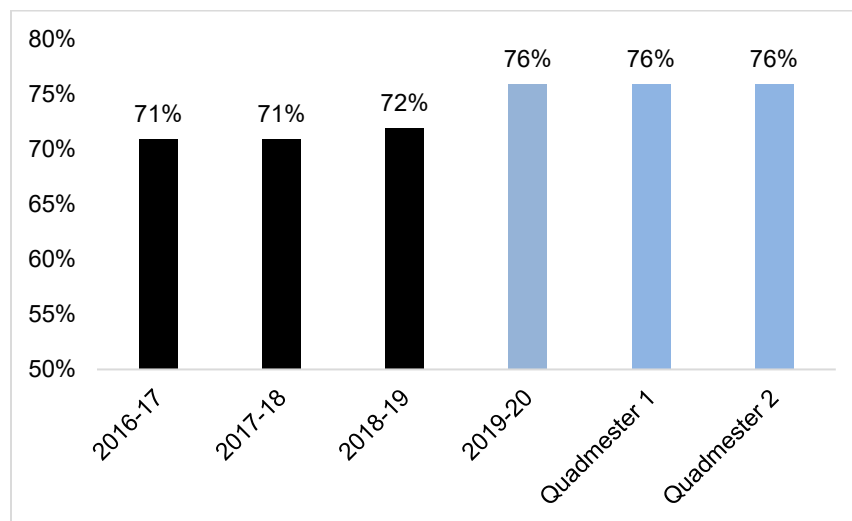
While teachers play this role regardless of whether they are working in a remote environment or face-to-face in a classroom, teachers in remote learning environments have access to a much more limited set of social inputs than they would were they teaching in person. These inputs are arguably a critical part of learning and assessment for students and teachers. The suddenness and vastness of the change to learning experiences that occurred at the outset of the pandemic has created effects in relation to learning impact that is complex and varied.

Anastasia Poulis (personal conversation, February 8, 2021), a Centrally Assigned Principal and key lead in early reading for the TDSB, recognizes the challenge in teaching reading remotely, but is also emphatic as to the quality of innovation and success that teachers exhibited across Kindergarten to Grade 8. Alongside the challenge of learning and assessment in the virtual environment just detailed, it seems also critical for the TDSB to understand what virtual learning can offer a bricks and mortar system. Both flexibility and responsiveness in digital environments are areas worth understanding more carefully. This too, should be an important part of considering what impact to learning means and what practices emerge that we want to bring forward into a future in which all schools are bricks and mortar schools.

### Secondary School Quadmester 1 and 2 Marks

Differing from some jurisdictions reported at the outset, TDSB secondary school report card marks have gone up by four percentage points since the pandemic began. Additionally, this average rise in marks has been sustained throughout Quadmester 1 and 2.

**Figure 1. Average Marks of All Grade 9 to 12 Credit Courses Taken by TDSB Students**



But, when breaking this information down by mark ranges, this rise in averages has not been even across all mark ranges. Table 1 provides a percentage breakdown within specific mark ranges.

**Table 1. Report Card Mark Range of All Grade 9 to12 TDSB Students**

<b>Mark Range</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>Quad 1 2020-21</b>	<b>Quad 2 2020-21</b>
<b>0-49</b>	10%	9%	9%	6%	7%	7%
<b>50-59</b>	13%	13%	13%	11%	10%	10%
<b>60-69</b>	14%	14%	13%	11%	10%	9%
<b>70-79</b>	21%	20%	20%	18%	16%	15%
<b>80-100</b>	43%	44%	45%	54%	57%	59%
<b>70-100</b>	64%	64%	65%	72%	73%	74%

In considering the percentages of students in specific mark ranges before and during the pandemic (bold line marks separation), failure rate has gone down slightly (2 percentage points), and subsequent ranges 50-59 through to 70-79, have also seen a moderate percentage point decrease from 2 to 4 percent. While, the percentage of students who received marks in the 80-100 range has gone up significantly when comparing before and during the pandemic (9 to 16 percentage points). Considering the relative stability of this indicator in relation to secondary school success (both Figure 1 and Table 1), these shifts in percentages are significant in relation to secondary school learning during the past year.

As will be detailed in looking at Grade 1 reading marks in the next section, there is evidence here that report card marks may be reflecting a different set of learning impacts than they did before in person learning was disrupted. While still early in the analysis of these differences there may be several factors that contribute to the rise in average marks as follows:

- The TDSB set specific assessment policies at the outset as well as during the pandemic that may have affected how teachers approach summative assessments and grading in general.
- Seventy-five percent of in person learning occurs virtually in the TDSB at the secondary level. Assessment and learning in the virtual environment are different than in person. While there are less available social inputs in virtual learning, there are also a variety of different virtual platforms and opportunities to demonstrate learning.
- It may be more challenging for students to engage in virtual classroom spaces. Students across Grades 6 to 12 in the TDSB report significantly lower levels of classroom

engagement in the virtual space compared to pre-pandemic questions on classroom engagement.

- In TDSB secondary schools, culminating activities designed to provide opportunities for students to demonstrate understanding of course content now include a broader range of possibilities. Final exams traditionally worth 30% of a course mark have been reduced to very few or none during the pandemic.

While more evaluation and information are needed, these factors all may have contributed in some way to the 4% rise in the achievement average for credit courses. Following from this, it also may be important to consider what the differences in understanding for students across Kindergarten to Grade 12 might mean for content, curriculum, and learning in September as the TDSB re-establishes itself in a bricks and mortar learning environment.

### Grade 1 Reading

**Figure 2. Percentage of Students Meeting Grade Level Expectations in Grade 1 Reading Assessments in a Quarter of the Schools**

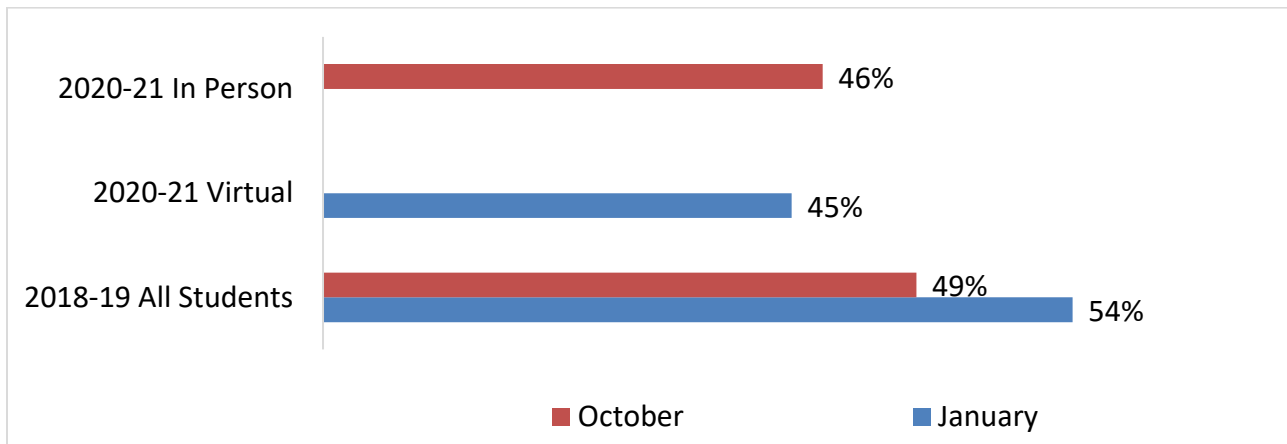


Figure 2 describes the percentage of students meeting grade level expectations through two different assessment tools, the Developmental Reading Assessment (DRA) and Prince Milburn (PM) Benchmarks. The figure outlines the grade level expectations at two different times of the year, October and January, for the same sample of a quarter of TDSB schools. The reading data drawn from 2018-19 for these schools serves two purposes in this analysis:

1. It provides a pre-pandemic comparison at two different instances a half school year apart.

2. It provides an example of a percentage point change in proportions of students meeting grade level expectations before and during the pandemic in order to consider a preliminary system growth rate in reading achievement for Grade 1 students.

While only preliminary analysis and cautions need to be placed on any inferences due to the degrees of disruption in learning environments and the demographic differences in comparing virtual learning environments with in person learning in schools (TDSB, 2020), the following points may have relevance:

- In October 2020, the proportion of students attending school in person that are meeting grade level expectations in a quarter of all TDSB schools is three percentage points lower than students prior to the pandemic in October 2018 (46% vs. 49%).
- There is nearly a ten percentage point difference in the proportions of students meeting grade level reading expectations in virtual schools in January 2021 (45%) when compared to pre-pandemic percentages (54%) in January of 2019.
- From October 2018 to January 2019, the number of students meeting grade level expectations in reading increased by five percentage points from 49% to 54%.
- Overall, in considering the percentage point shifts and differences, the pandemic seems to have disrupted literacy learning for many early elementary students to large degrees. Given the importance that literacy capacity has on future academic success throughout elementary and secondary schooling, these data are concerning.

**Figure 3. Percentage of Students Meeting Grade 1 Reading Expectations**

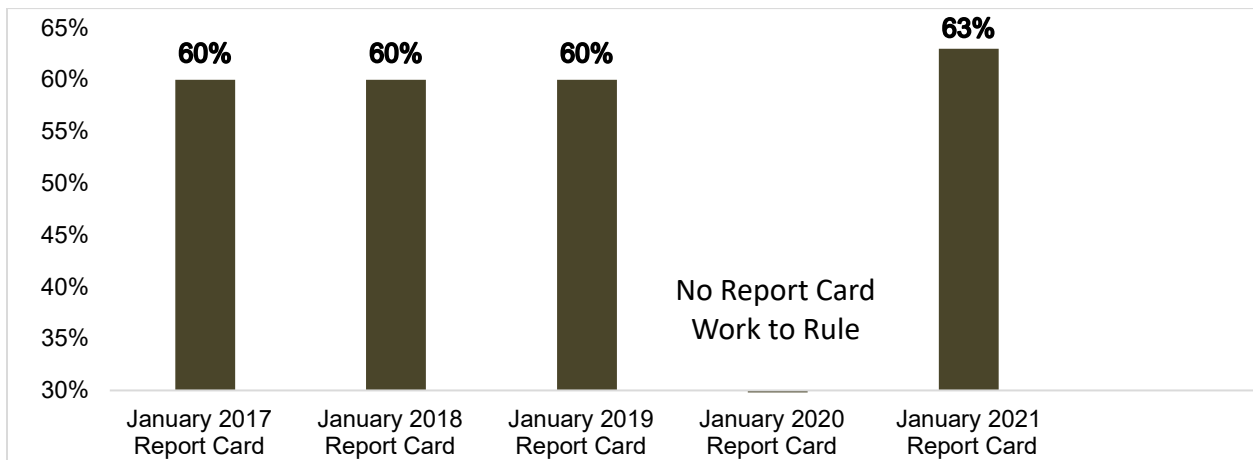


Figure 3 shows relatively stable percentages of students meeting grade level expectations at level 3 and above for three years from 2017 to 2019. The 2021 report card percentages for January show a three percentage point increase in meeting this level in reading.

This percentage point rise seems comparable or in-line with the previous discussion in relation to secondary school mark increases. More careful work needs to be done to disaggregate these proportion shifts by demographics as well as to use different data and approaches, including perceptions of educators working in this context in order to further understand the percentage point increases in grades across the TDSB.

However, two things seem relevant overall in relation to early elementary reading in general:

1. The nine-percentage point decline in reading level scores from 2019 to 2021 (Figure 2) indicates that the TDSB may have a significant difference in reading skills for early elementary school moving forward that will need to be a key area to target in fall. Put more directly, early years literacy has suffered for many students during the pandemic due to the periodic or continual absence of in person classroom opportunities for students to learn how to read.
2. The discrepancy between reading marks and reading assessments in 2021 needs a more in-depth analysis, which is currently in process with an early summer completion date. The degrees to which teachers may have needed to shift their assessment processes to accommodate the differences occurring within the learning environments in schools, especially in the virtual learning environments, was a considerable challenge for educators and schools. As referenced at the outset, classroom assessment draws from a variety of sources simultaneously (Ontario Ministry of Education, 2010). The inability to access many of these sources challenges the capacity for educators to assess students or access the same range through which a student might demonstrate conceptual understanding of curriculum, including reading skills at Grade 1. This point is important to note across all assessments from Kindergarten to Grade 12 and will be especially relevant in looking at secondary school marks over this past year.

The decline in proportions of students at Grade 1 reading expectations as measured in the reading scores and the importance in general of early elementary reading for student success across Kindergarten to Grade 12, makes continued monitoring and further evaluation of early literacy outcomes a key part of the remote learning evaluation currently in progress.

While students report, amongst other things, that virtual learning environments have had a negative impact on their learning, the report card mark averages have risen during the pandemic. This discrepancy needs a more careful analysis, however several factors detailed earlier may have influenced this rise in report card mark averages. A larger evaluation of learning impacts for this past year is forthcoming with a planned completion date of early summer 2021.

## Appendices

Appendix A is the presentation that accompanied this report at the [TDSB's Program and School Services Committee on March 31, 2021](#).

## References

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# Preliminary Findings on the Impacts on Learning Due to the Pandemic

Program and School Services Committee  
Research and Development

March 31, 2021



# Purpose of Evaluating the Impacts on Learning During the Pandemic

- To inform direction, resources, and strategy in relation to learning in 2021-22; and
- To ensure that the TDSB benefits from any new capacity and practices gained through working digitally over the course of this year.

# The Impact of COVID-19 on Grades or Marks Across North America

- Grade averages, credits and marks are varied across jurisdictions in both Canada and the US—with some reporting increased failure rates (Alphonso & Perreux, 2021; Strauss, 2020) and others reporting increased proportions reaching higher grade averages (Goldstein, 2020).
- Some jurisdictions (e.g., New York, Los Angeles, and the TDSB) established policies and communications with direction for schools to balance feedback on learning with concern for student mental health during the pandemic (Goldstein, 2020).
- Other jurisdictions that may not have attended to this balance centrally and explicitly have reported higher failure rates (Alphonso & Perreux, 2021; Strauss, 2020).
- Some post-secondary institutions are also reporting higher Grade Point Averages (GPAs) than they did prior to the pandemic (Flaherty, 2020).

# Key Considerations in Evaluating the Impacts on Learning

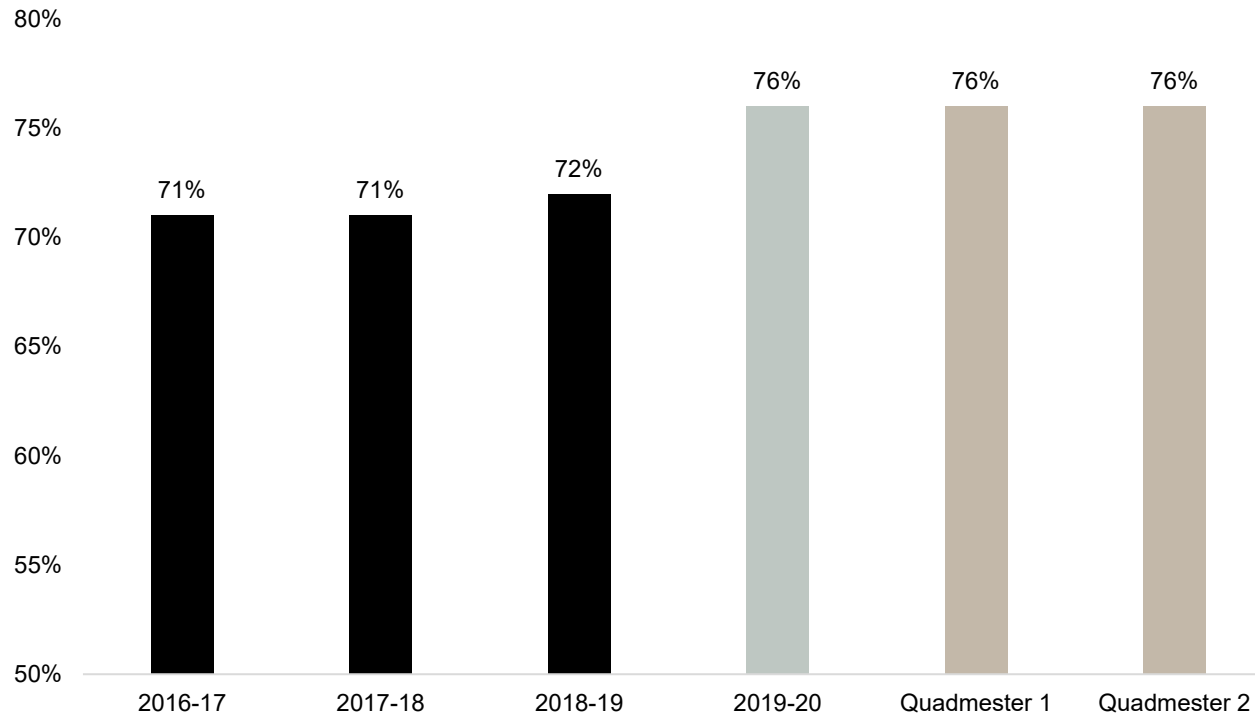
***Students have indicated that their learning has been affected by the change in school service:***

- 84% of Grades 6-12 students in the TDSB have indicated that they learn better in person (TDSB, 2021).
- The proportion of students indicating active participation in classrooms has gone down for this population of students by 37 percentage points (TDSB, 2021).
- A more robust analysis on learning impact is underway and will be ready by early summer.

***Increased digital capacity and fluency for the entire system has opened up new potential opportunities in schools and throughout the system:***

- Flexibility, responsiveness, and diversity of a digital medium could positively influence the capability for students to differentiate understanding, or show different ways of knowing.
- Increased digital capacity may help deepen community engagement in schooling, e.g., parent-teacher conferences, Community Advisory Committee meetings, TDSB staff meetings, and adapted learning models for some student *blending* and in-class/home connections.

## Average Marks of All Grade 9 to 12 Credit Courses Taken by TDSB Students



TDSB secondary school report card marks have gone up since the pandemic began. Additionally, the four percentage point average rise in marks has been sustained throughout Quadmester 1 and 2.

## Report Card Mark Range of All Grade 9 to12 TDSB Students

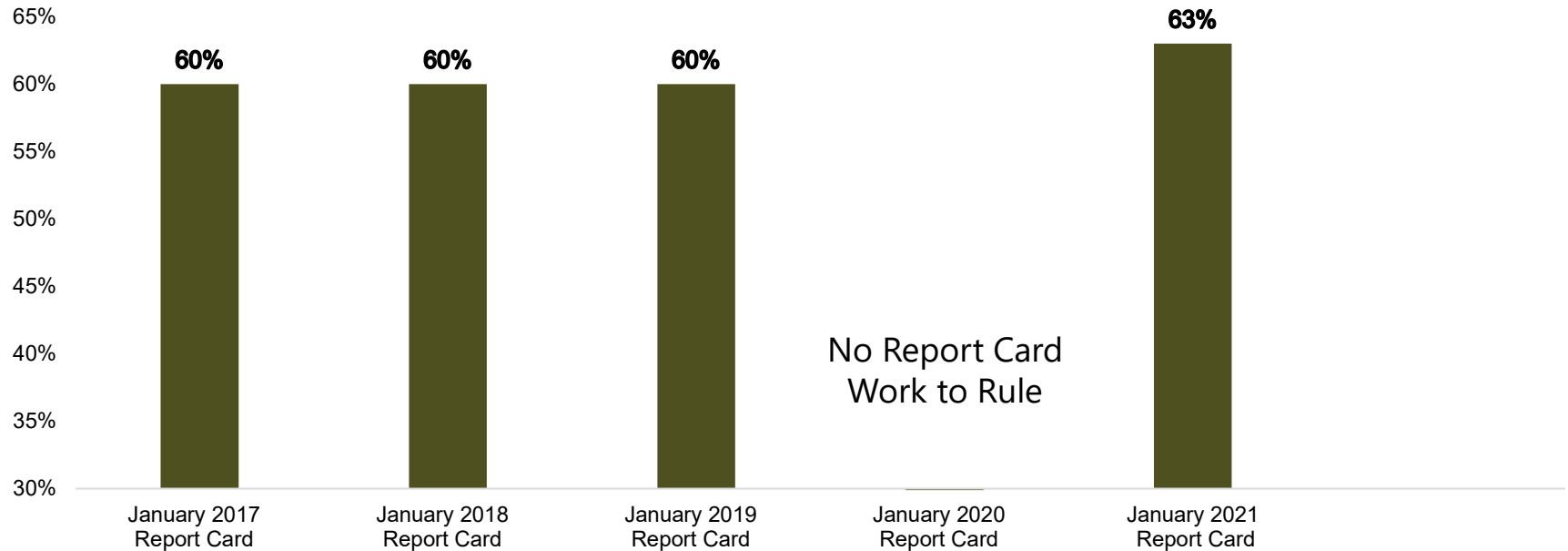
Mark Range	2016-17	2017-18	2018-19	2019-20	Quad 1 2020-21	Quad 2 2020-21
0-49	10%	9%	9%	6%	7%	7%
50-59	13%	13%	13%	11%	10%	10%
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<b>70-100</b>	<b>64%</b>	<b>64%</b>	<b>65%</b>	<b>72%</b>	<b>73%</b>	<b>74%</b>

- Failure rate has gone down slightly (2 to 3 percentage points).
- Subsequent mark ranges 50-59 through to 70-79, have also seen a moderate percentage point decrease from 2 to 4 percent.
- The percentage of students who received marks in the 80-100 range has gone up significantly comparing before and during the pandemic (9 to 16 percentage points).

# Factors Contributing to the Differences in Grade Averages and Mark Ranges

- The TDSB has set assessment policies during the pandemic that may have affected how teachers approach summative assessments and grading in general.
- Assessment and learning in the virtual environment is different than in person. While there are less available social inputs in virtual learning, there are also a variety of different virtual platforms and opportunities to demonstrate learning.
- It may be more challenging for students to engage in virtual classroom spaces. Students across Grades 6-12 in the TDSB report significantly lower levels of classroom engagement in the virtual space compared to pre-pandemic questions on classroom engagement (TDSB, 2021).
- In secondary schools, culminating activities designed to provide opportunities for students to demonstrate understanding of course content now include a broader range of possibilities. In the TDSB, final exams have been reduced to very few or none during the pandemic.

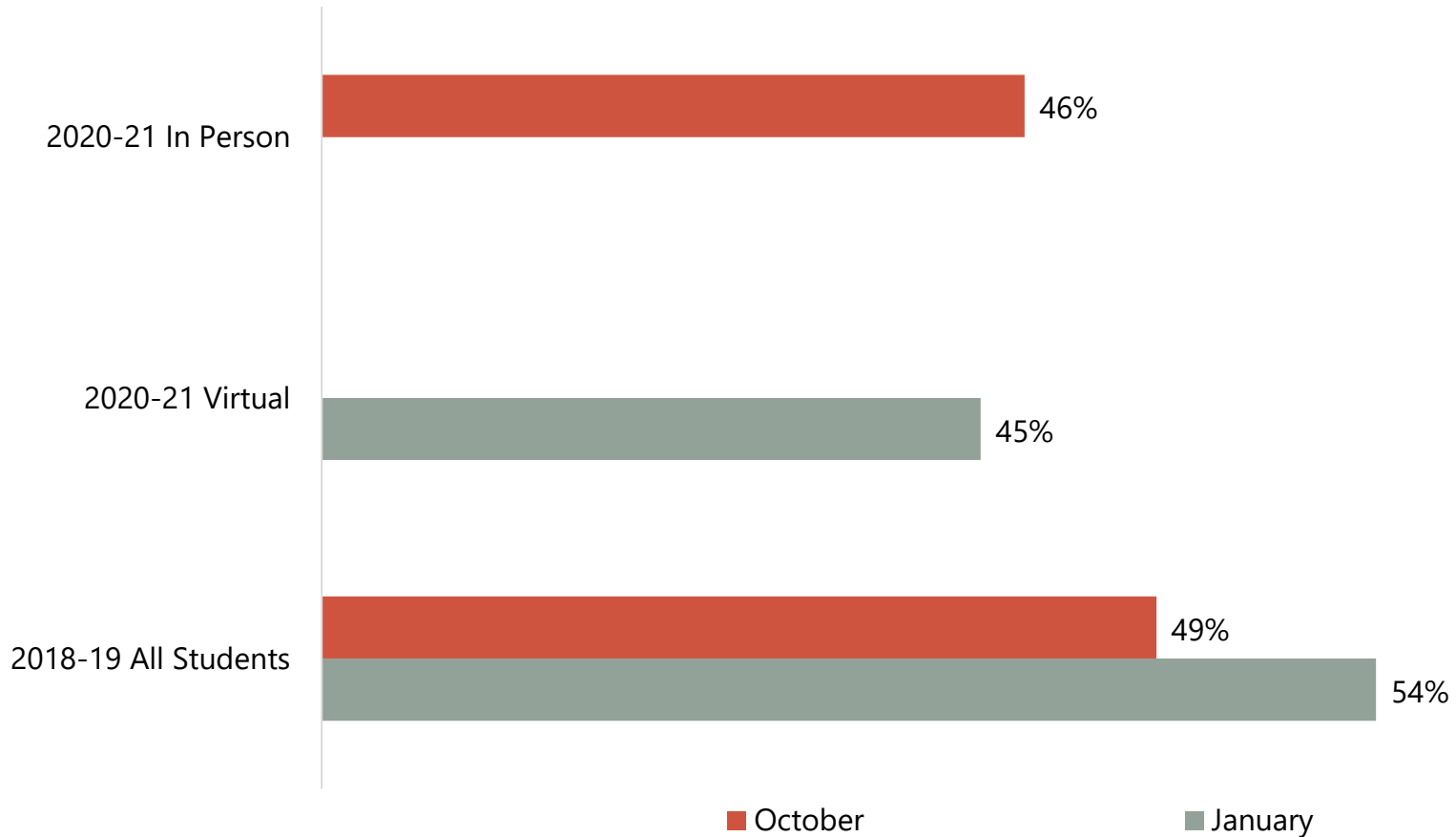
## Percentage of Students Meeting Grade 1 Reading Expectations



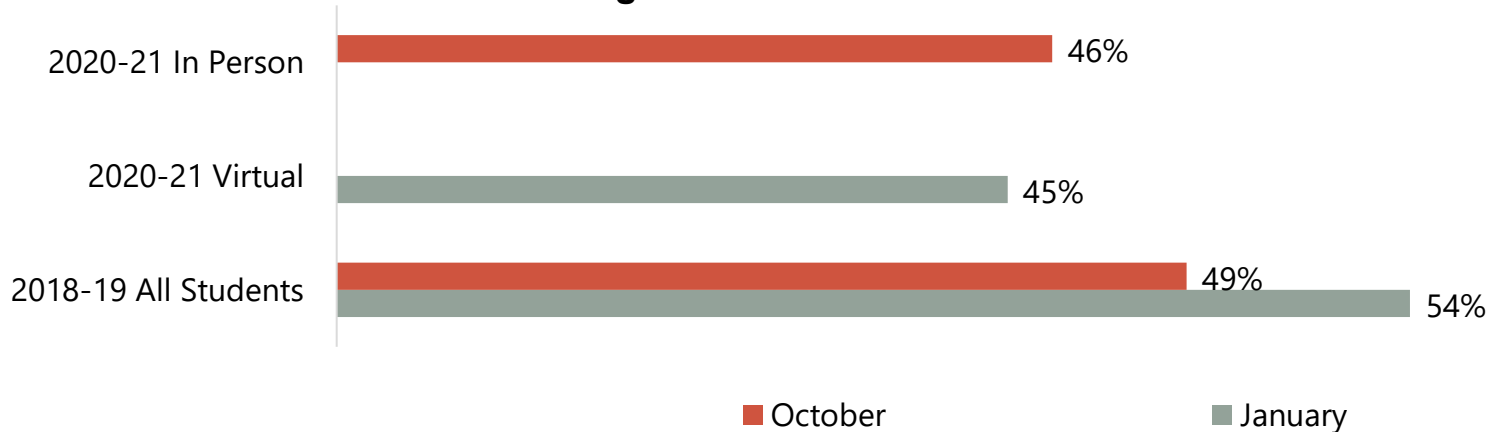
In-line with secondary school marks, there has been a three percentage point increase in the proportion of students meeting level 3 and above in Grade 1 reading when compared to the previous three reporting periods available for January.



### Percentage of Students Meeting Grade Level Expectations in Grade 1 Reading Assessments in a Quarter of the Schools



### Percentage of Students Meeting Grade Level Expectations in Grade 1 Reading Assessments in a Quarter of the Schools



- In October 2020, the proportion of students attending school in person that are meeting grade level expectations in a quarter of all TDSB schools is three percentage points lower than students prior to the pandemic in October 2018 (46% vs. 49%).
- There is nearly a ten percentage point difference in the proportions of students meeting grade level reading expectations in virtual schools in January 2021 (45%) when compared to pre-pandemic percentages (54%) in January of 2019.
- From October 2018 to January 2019, the number of students meeting grade level expectations in reading increased by five percentage points from 49% to 54%.
- Overall, in considering the percentage point shifts and differences, the pandemic seems to have disrupted literacy learning for many early elementary students to large degrees. Given the importance that literacy capacity has on future academic success throughout elementary and secondary schooling, these data are concerning.

# Preliminary Considerations

- The inability to access the same quality of social interaction that is available in bricks and mortar classrooms:
  - challenges the capacity for educators to assess the range through which a student might demonstrate conceptual understanding of curriculum, including reading skills in Grade 1; and
  - may be contributing to indicators from students (Grades 6-12), that compared to 2016-17, show higher proportions of students are struggling with their mental health in areas like stress, happiness, and loneliness (TDSB, 2021).
- The nearly ten percentage point difference in Grade 1 students reading at grade level as assessed by Price Milburn (PM) Benchmarks and Developmental Reading Assessments (DRA) combined with the amount of Kindergarten students held out of school this year (about 2,000 students) suggests that literacy skills in early elementary should be a core focus of the TDSB in September.

# Preliminary Considerations Continued

- Considering the degrees to which families and students report getting the right amount of instruction to complete their work (70%) as well as feeling supported by their teachers (90%) (TDSB, 2021), increases in average marks may be a result of a combination of factors including:
  - care for student mental health during this crisis;
  - differences in learning environments and assessment practices;
  - central policies designed to support both learning and mental health of students;
  - change in culminating tasks that have resulted in a reduction of the traditional 30% final exam.
- The vast differences in what and how assessment operates in virtual versus in person environments makes using grades as a metric for impact on learning complicated. A variety of different data is required to provide a more descriptive picture.

