Student Perceptions of Online Learning

in Ontario during COVID-19

Results of a Province-wide Student Survey

Background

The discussion paper *Transitioning from the COVID-19 School Experience,* released in May 2021, identified a number of critical questions to be considered as schools plan for the return to in-person learning post-pandemic. One of these questions focused on gathering a range of students' perspectives regarding their experiences with online learning. OPSBA engaged the services of an external researcher, Dr. David Jack to develop a student survey and conduct follow-up analysis. Collaborative input was provided by members of the Ontario Public School Boards' Association's Advisory Committee on The Future of Education – Learning and Teaching in a Digital Age.

Student Survey

Scope

An online survey was developed for students across Ontario in Grades 5 to 12. The survey items explored topics such as the types of online learning activities experienced before and during the pandemic, the use of technology, interactions with peers and teachers, completing tasks and assignments, online learning while at home and students' overall impressions of the online learning experience. Students were asked to respond to each item based on a four-point impact scale (*Didn't work well for me, Worked for me some of the time, Worked for me most of the time, Worked really well for me*) and invited participants to provide comments if they indicated that something didn't work well. The final survey item asked students to provide additional comments about a particular experience that didn't work well, that did work well, and suggestions they thought would improve online learning in the future. To determine if the online learning experience differed by age or other factors, demographic information was also collected regarding students' grade level, racial-ethnic identity, and gender identity. Students were also asked to identify their school board in order to provide board-specific reports where response rates allowed.

Given the exploratory nature of this survey, it is important to consider both the qualitative and quantitative results together to best understand students' perspectives about their experiences with online learning during the pandemic.

Distribution and Response Rates

The survey was distributed to OPSBA-member school boards for review, a letter from the Director of Education was sent to inform parents of the survey and then the survey was e-mailed directly to students by school boards. The survey was also promoted by the public Ontario Student Trustees' Association through student trustee communication channels including student senates and social media platforms. Survey responses were collected over a six-week period in April and May 2021 when all public schools in the province were closed because of public health restrictions. To encourage participation, it was decided not to ask students for permission to use their anonymous comments verbatim, thus, no quotes appear in this report.
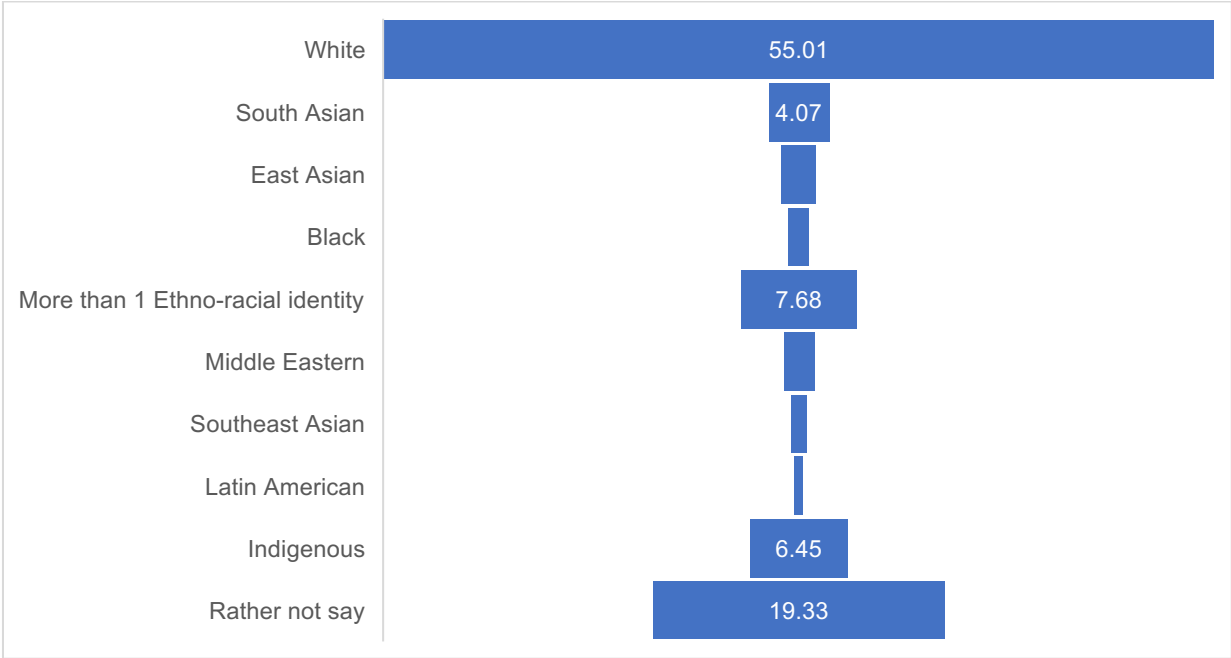
In total, more than 10,000 usable surveys were completed from 28 school boards across Ontario providing a response rate of 1.6% among participating boards, and 1.3% of all eligible boards. The response rate from eligible secondary students (Grades 9 to 12) was 8.2% compared to the response rate for eligible elementary students (Grades 5 to 8) of 10.8%, roughly approximating the relative total student population in both groups. Students responded from all geographic regions of the province but with a disproportionately small participation rate from school boards in the province's largest urban centres (Greater Toronto Area and Ottawa).

Distribution by Grade as a Percentage of Total Participants

Grade	Percentage
Gr. 5	11.07
Gr. 6	13.01
Gr. 7	14.29
Gr. 8	14.22
Gr. 9	12.07
Gr. 10	12.58
Gr. 11	12.14
Gr. 12	10.63

Figure 1 - Percentage of Survey Participants

Distribution by Ethnic-Racial Identity as a Percentage of Total Participants

Ethnic-Racial Identity	Percentage
White	55.01
South Asian	4.07
East Asian	
Black	
More than 1 Ethno-racial identity	7.68
Middle Eastern	
Southeast Asian	
Latin American	
Indigenous	6.45
Rather not say	19.33

Figure 2 - Percentage of Survey Participants
NOTES:

- Descriptors from *Data Standards for the Identification and Monitoring of Systemic Racism,* Government of Ontario, 2018.
- Most students choosing "Rather not say" identified as "Canadian" in the comments section of this item.
- Because of the number of students choosing "Rather not say", or "More than 1 Ethnic-radial identity", this distribution under-represents all identity groups except for Indigenous students (higher than the census) and Middle Eastern students (approximately the same as the census) when compared to the Ontario population as per the 2016 Canadian census.

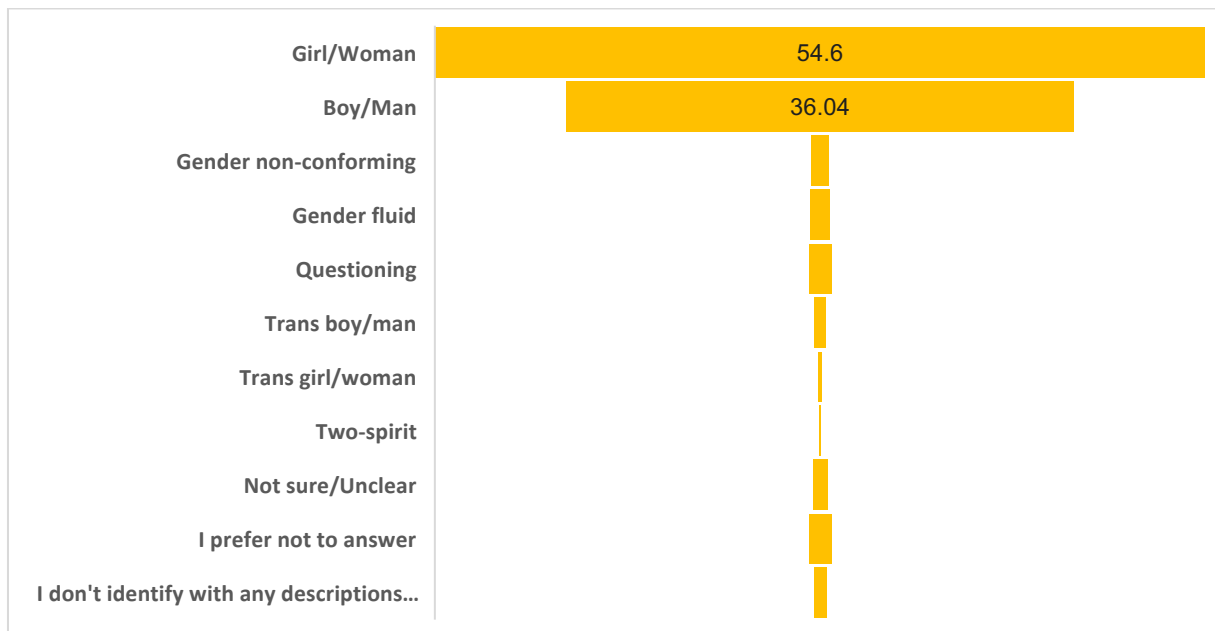**Distribution by Gender Identity as a Percentage of Total Participants**

Gender Identity	Percentage
Girl/Woman	54.6
Boy/Man	36.04
Gender non-conforming	
Gender fluid	
Questioning	
Trans boy/man	
Trans girl/woman	
Two-spirit	
Not sure/Unclear	
I prefer not to answer	
I don't identify with any descriptions...	

Figure 3 - Percentage of Survey Participants

Findings - Analysis by Item

Online Learning Activities Before and During the Pandemic

As identified in the *Transitioning from the COVID-19 School Experience* discussion paper, research into online learning during the pandemic has highlighted necessary changes to teaching and its relation to student achievement. As such, students were asked how often they engaged in various online learning activities prior to, and during, the pandemic. For example, students were asked how often they did independent research, learned from videos, completed assignments, collaborated online with classmates, or created something to show what they had learned.

Not surprisingly, students engaged more often in online learning activities during the pandemic than beforehand. However, not all online activities increased to the same extent, or at all. For example, while the frequency of *reading independently* and *using a range of apps* increased nearly twofold, *creating something unique to demonstrate their learning* remained relatively constant pre- and during the pandemic, while *collaborating online with classmates* was much less frequent during the pandemic.

How students engaged in online learning prior to the pandemic is likely to be related to many factors such as variations in curriculum expectations (e.g., music vs. social

science), access to technology, and students' learning preferences. Therefore, further analyses of specific online learning activities were provided to individual participating boards with sufficient student response rates to the survey.

Using Technology

Students were asked to reflect on the technology used for online learning during the pandemic, in particular the devices they had at their disposal, the apps and programs they were expected to use, the speed and reliability of internet services where they live, and the key learning platforms used by their school board to facilitate online learning.

Figure 4 shows what students thought of the technology available to support online learning.
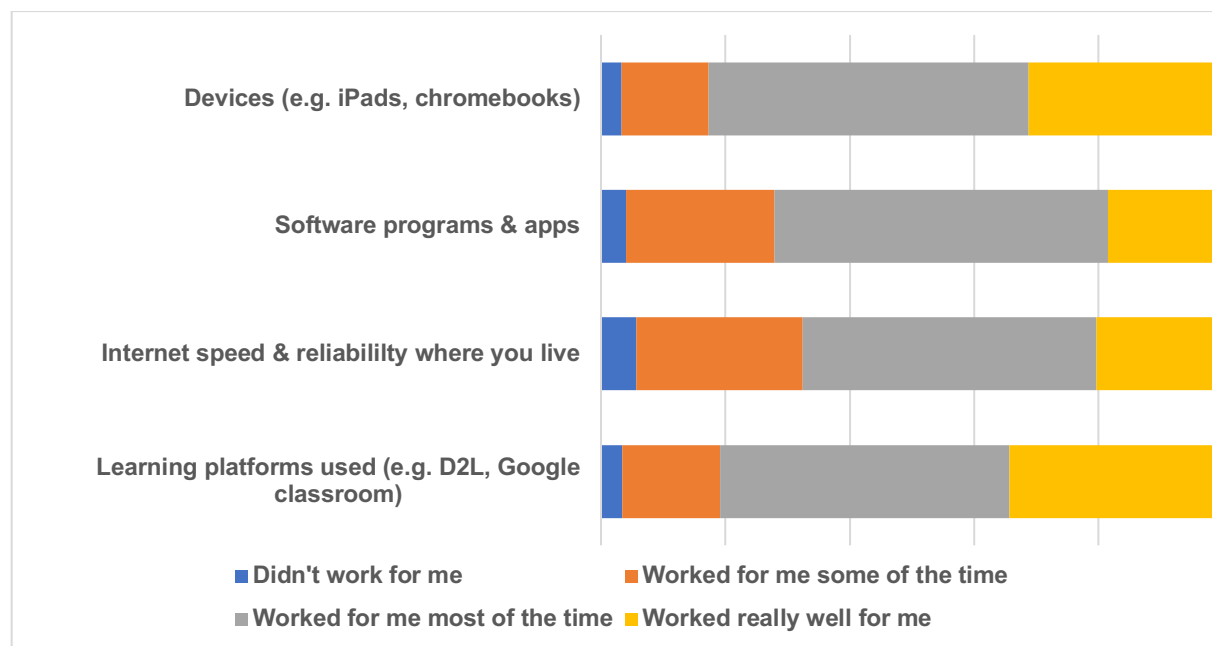
Figure 4 – Student Impressions of Technology
N = 10,678

Overall, students reported that their learning technology worked, or worked really well, for them most of time. As anticipated, nearly one in three students reported internet speed and reliability as a technology concern most or some of the time. Lower levels of satisfaction with internet speed and reliability were consistent between Northern, more rural, boards compared with southern boards with urban centres (Kitchener-Waterloo, Windsor, Guelph) where levels of satisfaction were significantly stronger (p = .05).

Comparisons were made between student groups based on demographic information provided to see if any group or groups of students had different impressions of the technology they used during online learning. Of particular interest were significant differences between groups based on "what didn't work" vs. "what worked well". Table 1 shows which groups showed significantly different responses (p = .05).

Table 1

	Didn't work for student identifying as:	Worked really well for students identifying as:
Devices	• Black • White • Middle Eastern • Boys* • Senior Students**	• South Asian • East Asian • Boys • Junior Students***
Apps/Programs	• White • Indigenous • Middle Eastern • Black* • Boys	• South Asian • East Asian • Black • Boys • Junior Students
Internet speed/reliability	• White • Indigenous • Black • Boys • Senior Students	• South Asian • East Asian • Black • Boys • Junior Students
Learning Platforms	• Black • White • Indigenous • Boys • Senior Students	• South Asian • Middle Eastern • East Asian • Girls • Junior Students

*Students self-identifying in one group can report opposing impressions of the same experience but no individual student can do so.
**Senior students represent those in Grades 11 and 12
***Junior students represent those in Grades 5 and 6

Interaction with Peers/Classmates

Student-to-student interactions for social or academic reasons are foundational to the school experience and human development in the formative years. While school-age students have been early adopters of internet-based interaction, it was important to examine how they perceived online interactivity as it became the predominant, and occasionally only, access students had to each other during the pandemic. It is

assumed that students continued to interact online for social reasons; Figure 5 shows their perceptions of peer-to-peer interactions for the purposes of online learning.
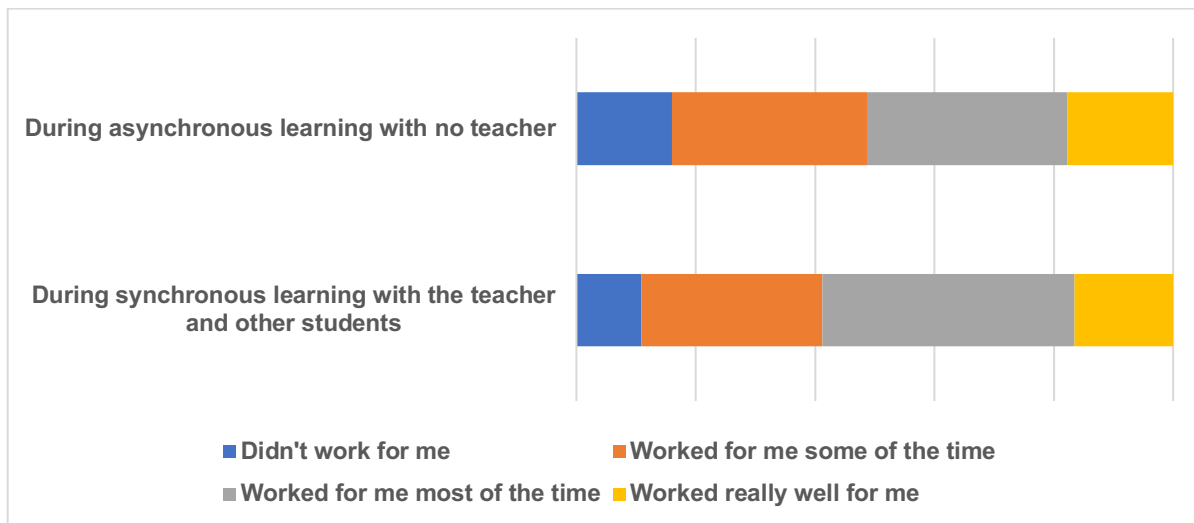
Figure 5 – Students' Interactions with Peers/Classmates
N = 10,585

Overall, students reported less satisfaction with peer interaction during asynchronous learning (time spent learning when the teacher was not teaching). Nearly 50% of students reported challenges with peer interaction during this portion of the school day with 16% claiming interactions with peers didn't work for them at all. Students reported slightly more positively about their peer interactions during synchronous learning times with 40% claiming peer interactions were difficult some or most of the time.

Table 2 shows significant differences between student groups relating to their reported interactions with peers and classmates when learning online.

Table 2

	Didn't work for students identifying as:	**Worked really well for students identifying as:**
During synchronous* learning time	• White • Boys • Senior Students	• South Asian • Black • Middle Eastern • East Asian • Boys • Senior Students
During asynchronous** learning time	• Indigenous • Middle Eastern • White • Black • Girls • Junior Students	• South Asian • Black • Girls • Junior Students

*Synchronous learning is the portion of the school day (75%) when students learned online with their teacher.

**Asynchronous learning is the portion of the school day (25%) when students were expected to learn/work independently when their teacher was not teaching.

Interactions with Teachers

Research is clear on the significant role teachers play in supporting student achievement and well-being – which may partially explain students' dissatisfaction with the restrictive ways in which students and teachers were able to interact with each other and identified one of the most unsettling changes brought about by the move to online learning during the pandemic. In the survey, students were asked for their impressions of some typical interactions with their teachers, summarized in Figure 6.
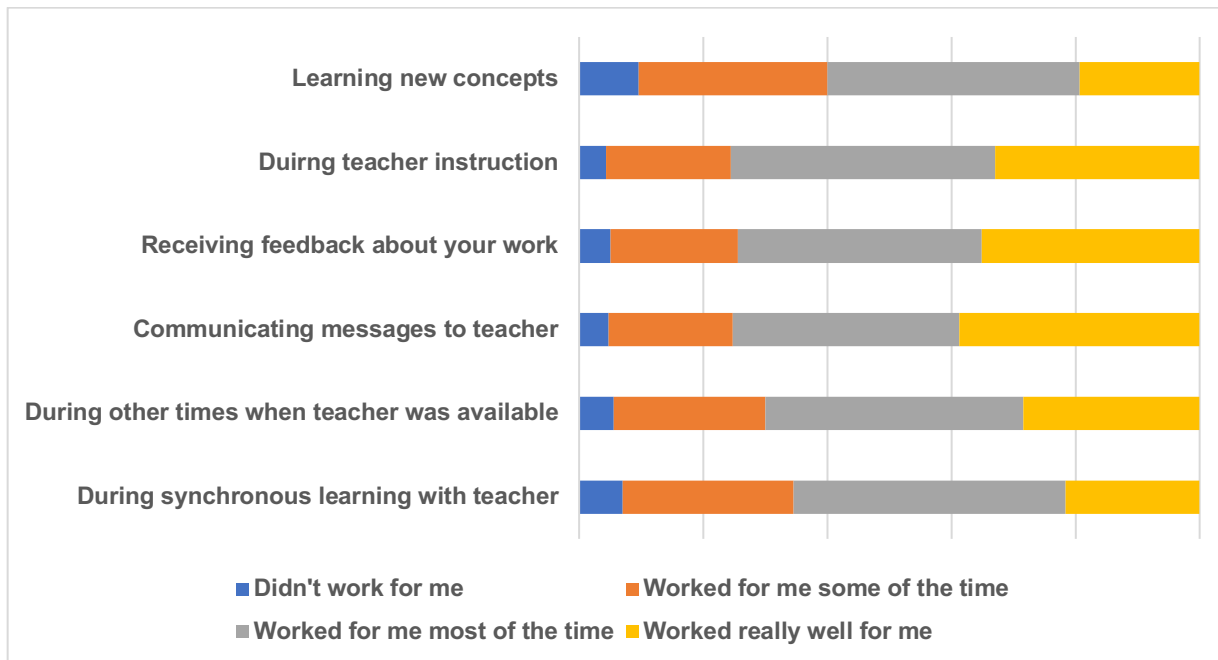
Figure 6 – Students' Interactions with Teachers
N = 10,643

Overall, students reported that their interactions with teachers worked for them some, most or really well approximately 90% of the time. This proportion drops to approximately 70% when the "some of the time" responses are excluded. Given the high stakes associated with effective student-teacher interactions, it is troubling that 30% of students were dissatisfied with how they were able to interact with their teachers, especially during critical times such as learning new concepts.

Responses were then disaggregated to look for differences between student groups. Table 3 identifies significant differences (p = .05) between student group responses.

Table 3

	Didn't work for students identifying as:	Worked really well for students identifying as:
Learning new concepts	• Black • White • Indigenous • Gender Non-Conforming • Senior Students	• East Asian • Middle Eastern • South Asian • Junior Students
During teacher instruction	• Black • White • Indigenous • Boys • Gender Non-Conforming • Senior Students	• Black • South Asian • East Asian • Middle Eastern • Girls • Junior Students
Receiving feedback	• Black • White • Boys	• Black • South Asian • Middle Eastern • East Asian • Girls • Junior Students
Communicating with teacher	• Black • Middle Eastern • Indigenous • White • Boys • Gender Non-Conforming	• Black • South Asian • East Asian • Middle Eastern • Girls • Junior Students
During other times when teacher was available	• White • Black • Indigenous • Boys • Gender Non-Conforming • Gender-Fluid	• Black • South Asian • Middle Eastern • East Asian • Girls • Junior Students
During synchronous learning time	• White • Black • Indigenous • Boys • Senior Students	• East Asian • Middle Eastern • South Asian • Junior Students

Since several student groups are listed in both the *Didn't Work for Me* and *Worked Really Well* categories, it is not possible to determine which of these groups fared better or worse. Instead, it is worth taking note of the number of groups in both categories to better understand students' perceptions of their interactions with teachers during online

learning. More groups of students as identified by race/ethnicity, gender and grade level found that interacting with teachers online didn't work for them than the groups who found it worked well. It is also useful to note which groups appear in the *Didn't Work for Me* category (e.g., Indigenous, boys, students in senior grades) that seldom or never appear in the *Worked Really Well* category to better understand the between-group differences.

Tasks and Assignments

Completing various tasks and assignments is an important part in student learning and is a key element in assessment and evaluation. While students have increasing opportunity to complete tasks and assignments online, doing so during the pandemic became a requirement for most students and across a wider range of curriculum areas than in the past. Students, therefore, were asked to rate how well they fared in working on and completing school assignments. The results are summarized in Figure 7.
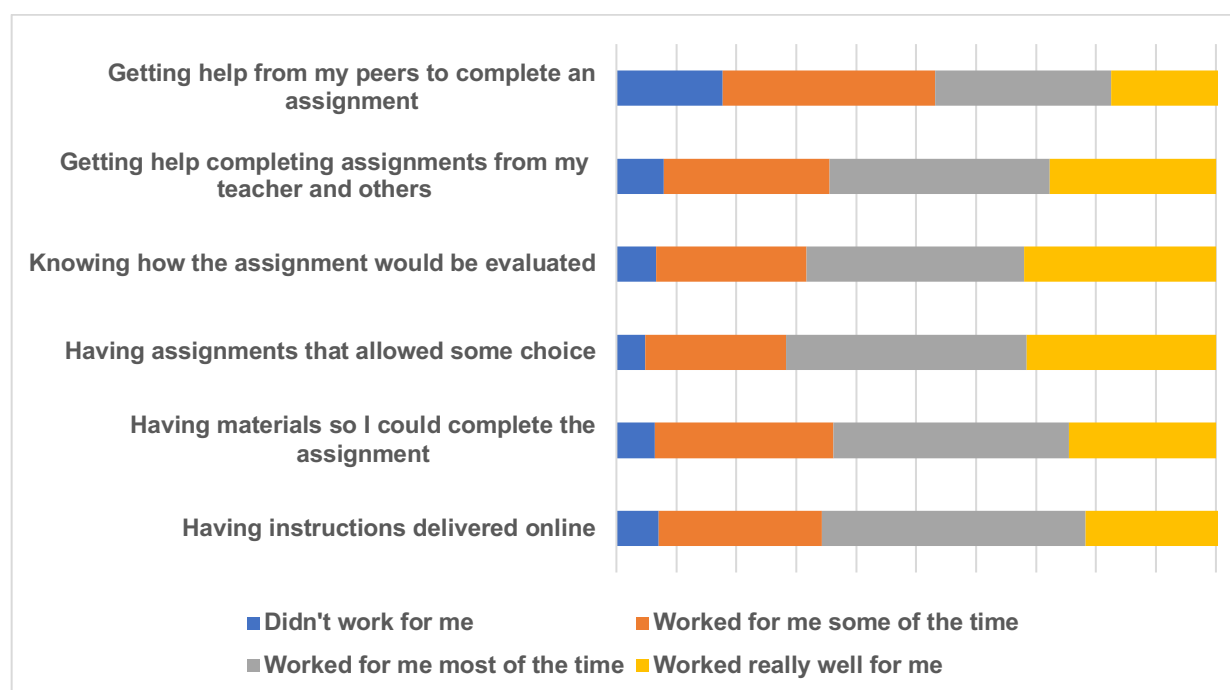

Figure 7 – Students Impressions of Tasks and Assignments during Online Learning N = 10,611

Positive ratings (worked well most of the time, worked really well) were reported by approximately 64% of students. Comparatively lower ratings were reported for *getting help from peers or teachers* and *having materials to complete assignments.* Nonetheless, about one-third of students reported that completing assignments was a challenge in online environments. This same proportion of students reported challenges

with internet speed and reliability, which must be considered a complicating factor when attempting to work and learn online (see Figure 4).

Subsequent analyses were conducted to explore possible differences between student groups when completing tasks and assignments. Table 4 identifies student groups whose ratings were significantly stronger or weaker than the combined student responses.

Table 4

	Didn't work for students identifying as:	**Worked really well for students identifying as:**
Getting help from peers	• Black • White • Indigenous • Girls	• South Asian • East Asian • Girls
Getting help from teachers	• Black • White • Indigenous • Boys • Senior Students	• Black • South Asian • East Asian • Middle Eastern • Girls
Knowing how assignments are evaluated	• Black • White • Boys • Gender Fluid • Trans Boys	• Black • South Asian • East Asian • Middle Eastern • Girls • Questioning
Having assignments that allowed choice	• Black • White • Indigenous • Middle Eastern • Boys • Gender Fluid • Senior Students	• Black • South Asian • East Asian • Middle Eastern • Junior Students
Having necessary materials available	• Black • White • Indigenous • Boys	• Black • South Asian • East Asian • Middle Eastern • Girls • Junior Students
Having instructions delivered online	• Black • White • Indigenous • Boys • Gender Fluid	• East Asian • Middle Eastern • South Asian • Junior Students

Similar to Table 3, the data in Table 4 do not support conclusions that some student groups in their entirety fared more or less well completing tasks and assignments during online learning. The data do show, however, that students from a wide range of identities found that completing schoolwork assignments online did not work for them and that fewer student groups found doing schoolwork online worked really well. The

data also suggest that some groups appear exclusively in the *Didn't Work for Me* category (i.e., White, Boys, Indigenous, Gender Fluid, Trans Boys; Senior Students) and that only three groups of students found online schoolwork to consistently Work Really Well for them: South Asian students, East Asian students, and students in junior grades.

Online Learning at Home

Learning online from home for extended periods of time was not only a novel approach to "school" for many students in Ontario, but it included many additional factors seldom experienced by many families. Especially when younger students engaged in online learning at home, student supervision and support became a challenge as parents and guardians juggled simultaneous demands for daytime child-care and/or working from home themselves. It may not be surprising, then, that students rated the context of home-learning more negatively than other elements related more specifically to what and how they were learning. Figure 8 illustrates their overall impressions of learning online at home.
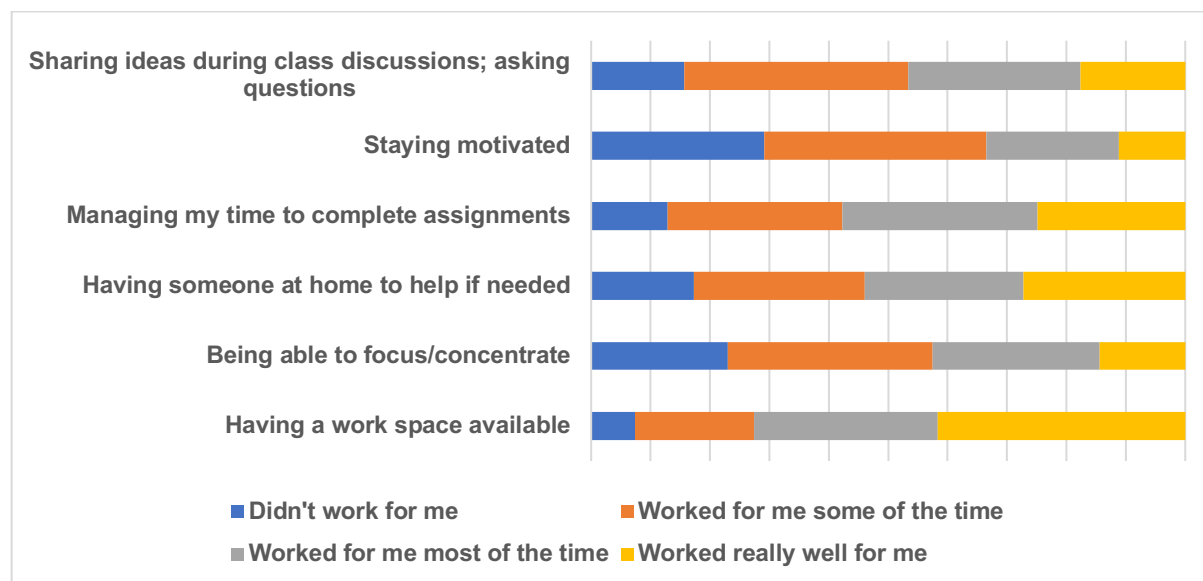

Figure 8 – Students' Impressions of Online Learning at Home
N = 10,602

Students' motivation and efforts to focus/concentrate while learning at home stand out compared to other factors. Nearly 30% indicated trying to stay motivated did not work at all with another 37% reporting they were able to stay motivated only some of the time. Focus and concentration were similarly problematic for 58% of students. These ratings may help explain why more than 50% of students found it challenging to share ideas during class discussions or ask questions. More than half the students reported more

favourably to having someone at home to help as needed, and more than 70% of students had a workspace available most of the time or more.

When disaggregated, the data in Table 5 show a more nuanced picture of how working online at home affected various student groups.

Table 5

	Didn't work for students identifying as:	Worked really well for students identifying as:
Sharing ideas during class discussions; asking questions	• Indigenous • White • Boys • Trans Boys • Senior Students	• South Asian • Black • East Asian • Middle Eastern • Boys • Junior Students
Staying motivated	• Indigenous • Black • White • Boys • Senior Students	• South Asian • Black • East Asian • Middle Eastern • Girls • Junior Students
Managing my time to complete assignments	• Black • White • Indigenous • Gender Non-Conforming • Gender Fluid • Questioning • Senior Students	• South Asian • Middle Eastern • Boys • Girls • Junior Students
Having someone at home to help if needed	• Black • Indigenous • White • Middle Eastern • Boys • Senior Students	• South Asian • East Asian • Boys • Junior Students
Being able to focus/concentrate	• Indigenous • White • Gender Non-Conforming • Gender Fluid • Questioning • Senior Students	• South Asian • East Asian • Middle Eastern • Boys • Junior Students
Having a workspace available	• Black • Indigenous • White • Middle Eastern • Girls • Senior Students	• South Asian • East Asian • Middle Eastern • Junior Students

Some patterns emerge in Table 5. For example, senior students consistently reported that all components of learning at home were problematic whereas junior-aged students more often reported the opposite. South Asian students were the only racial-ethnic group that consistently felt online learning at home worked well for them. As noted in Tables 3 and 4, relatively few student groups claimed online learning at home worked well compared to the wide range of student groups acknowledging online learning at home to be problematic.

Overall Impressions of Online Learning

After thinking about various elements of online learning, students were asked to provide an overall rating of their experience during the pandemic using an 11-point scale where 0 indicated *Online Learning Didn't Work for Me at All*, 5 indicated *Online Learning Worked So-So for Me*, and 10 indicated *Online Learning Worked Great for Me*. Figure 9 shows the distribution of ratings.

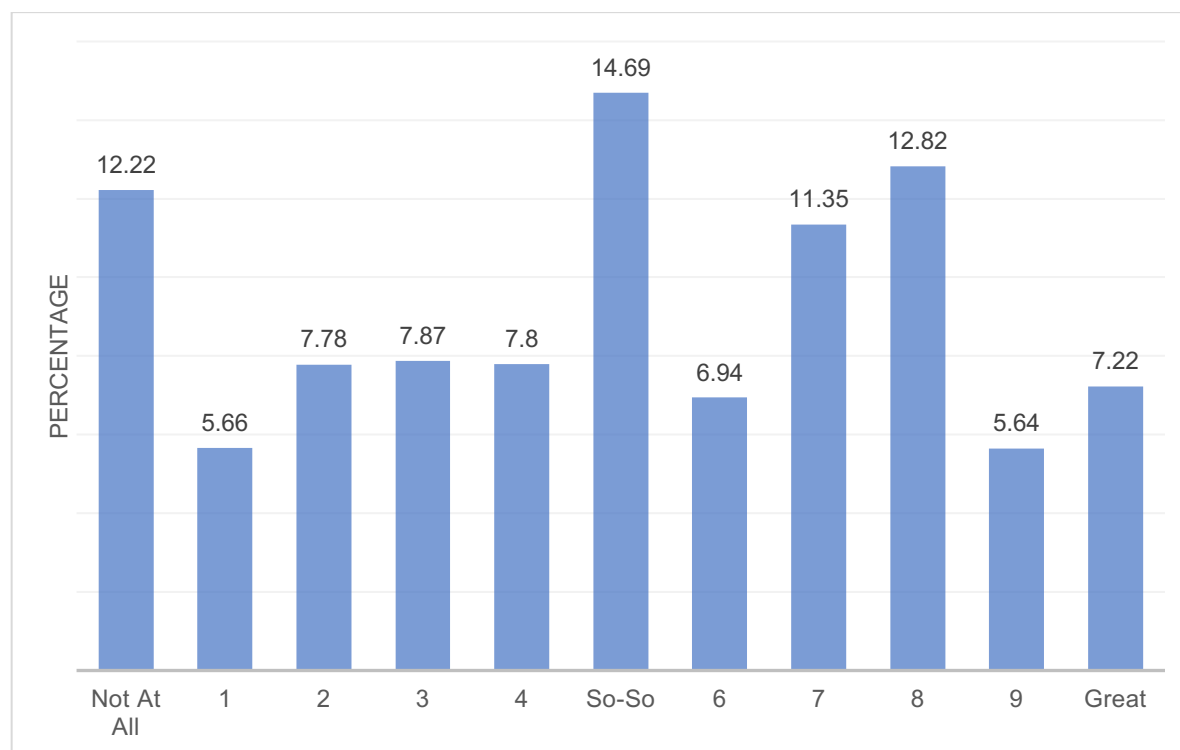*Figure 9 – Overall Ratings of the Online Learning Experience*
N = 10,659

Students' overall impressions of online learning can serve to summarize the quantitative data described above. With more than 10,000 responses, a more normal distribution

(bell curve) could have been anticipated. At first glance, the proportion of students for whom online learning worked *Great* is approximately 40% less than those rating the experience as *Not Working at All*. This difference evens out when the three upper and lower rating categories are combined (25.7% upper vs. 25.7% lower). When combined, the three middle ratings equal 29.4%, similar to the ratings at both extremes, giving the uneven distribution shown above.

Table 6 identifies significant differences within the two extreme ratings between various student groups. As previously observed, a wider range of student groups reported negative experiences with online learning than those who rated it as working *Great*. Unlike earlier analyses, however, there is no crossover between the extremes – no student group simultaneously rated the experience as extremely negative (Didn't Work at All) and positive (Worked Great).

Table 6

Didn't work At All for students identifying as:		Worked Great for students identifying as:	
• Black	• Questioning	• South Asian	• Boys
• White	• Gender Non-Conforming	• Middle Eastern	• Junior Students
• Indigenous	• Gender Fluid	• Girls	
• Trans Boys	• Senior Students		

Given the unexpected distribution of overall ratings, an examination of the comments provided in the final survey item provides further clarity and context about students' overall online learning experience.

Qualitative Analysis

To end the survey, students were asked to provide summary comments about their online learning experience during the pandemic. Three prompts were provided:

1. The thing about online learning that worked well for me was. . .
2. The thing about online learning that didn't work well for me was. . .
3. Here's what I would suggest to improve online learning in the future. . .

A total of 8,985 comments were provided for this item with a response rate of 94.8% for prompt 1, 96.3% for prompt 2, and 85.2% for prompt 3. This degree of responsiveness suggests that students were keen to provide their input, and that their comments fairly represent the overall provincial student population in Grades 5 to 12.

A sampling strategy was needed to manage the volume of available comments while maintaining reliability. Students' comments were analyzed from 13 school boards whose individual board response rate reached 10% or more. This constituted 83% of all surveys returned. For sample boards with fewer than 500 responses to any of the prompts, all comments were included and coded for analysis. For sample boards with more than 500 responses to any of the prompts, responses were included based on the dates surveys were submitted – the date(s) with the largest survey return that represented approximately 50% of the boards' total survey responses. This sampling strategy generated more than 6,000 student comments to be coded for recurring themes. Figures 10, 11 and 12 show the frequency of themes that emerged from students' responses to each of the three prompts.

Prompt 1: The thing about online learning that worked well for me was. . .

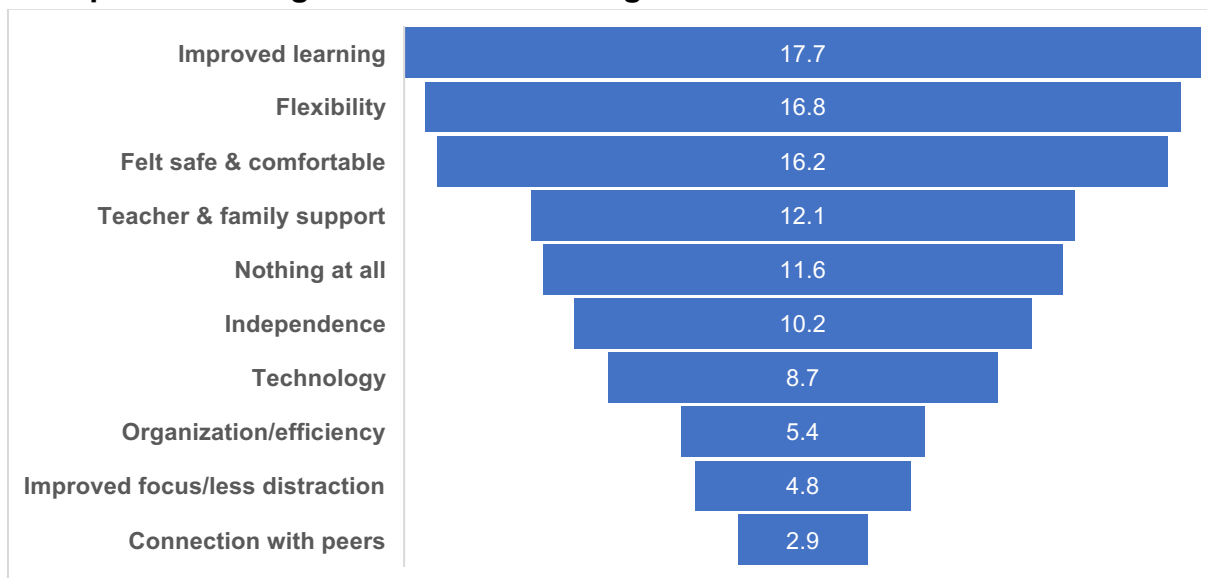| Theme	Value
Improved learning	17.7
Flexibility	16.8
Felt safe & comfortable	16.2
Teacher & family support	12.1
Nothing at all	11.6
Independence	10.2
Technology	8.7
Organization/efficiency	5.4
Improved focus/less distraction	4.8
Connection with peers	2.9

Figure 10 – Proportion of Responses

It is worth noting that the *Things That Worked* diminished quickly leaving a large difference between the most and least frequent responses. The top three responses are interrelated. Many students felt their learning improved when engaged in online learning at home. They were able to accomplish tasks at their own pace, and often committed more time to their studies because of public health restrictions. Students enjoyed this flexibility and the time saved by not having to commute to school or adhere to strict schedules. Students also commented on learning in comfortable, familiar spaces at home, often able to access support from family members and school staff as needed. However, more than 10% of students were unable to identify anything about online learning that worked well for them. Often these responses included only the word "nothing" in capital letters and assorted punctuation marks for emphasis.

Prompt 2: The thing about online learning that didn't work well for me was. . .

Category	Value
Focusing & distractions	16.7
Staying motivated	14.9
Internet connectivity	12.7
Everything	11.9
Teacher support/communication	11.2
Connection with peers	11.0
Diminished learning	9.4
Increased workload	8.4
Lack of physicality/screen time	8.2
Online teaching technique	7.4
Technology	6.2
Sense of well-being	5.8
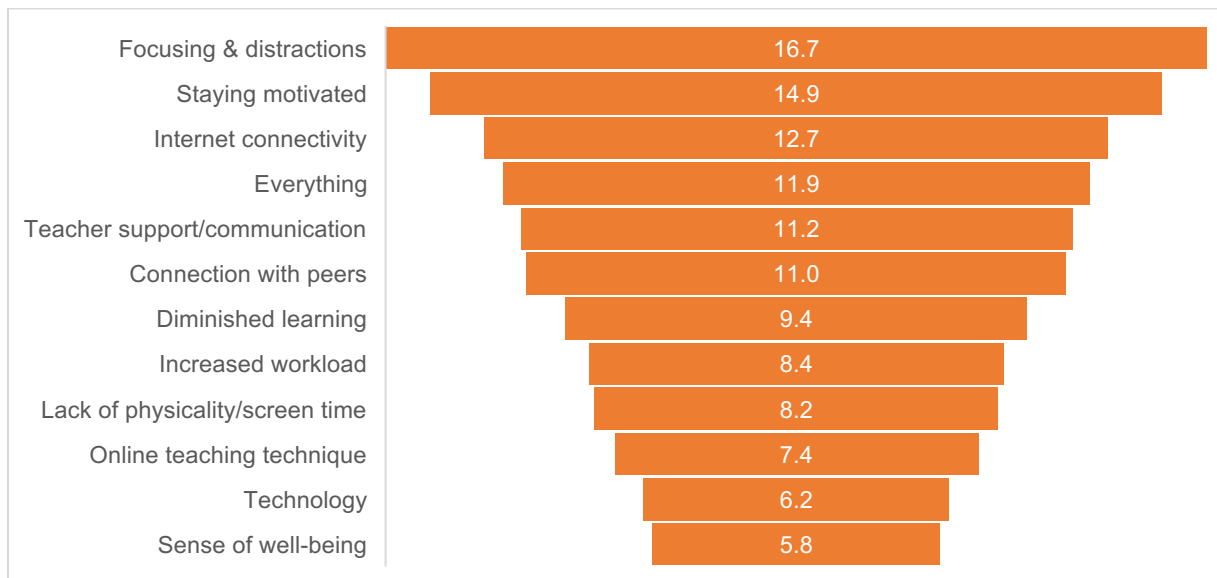
Figure 11 – Proportion of Responses

The shape of Figure 8 indicates more robust responses for the range of *Things that Didn't Work* compared to the *Things that Worked* for Ontario students. Focusing on work, staying motivated and dealing with internet connectivity problems were most irritating for students, followed by the blanket term, "everything". After this point, responses described challenges more closely related to learning per se, e.g., communicating with teachers, managing their workload, feeling they were not learning, missing peer interaction and the imbalance between the amount of required screen time and lack of physical movement. Several comments related to "online teaching technique", and students' necessary adjustment to student-teacher interaction exclusively in an online environment. While mentioned less frequently, students offered comments that suggested a diminished sense of emotional comfort, e.g., asking for teacher assistance that everyone can hear, feeling stressed and overwhelmed, and worried for their physical health should in-person learning start again.

Prompt 3: Here's what I would suggest to improve online learning in the future. . .

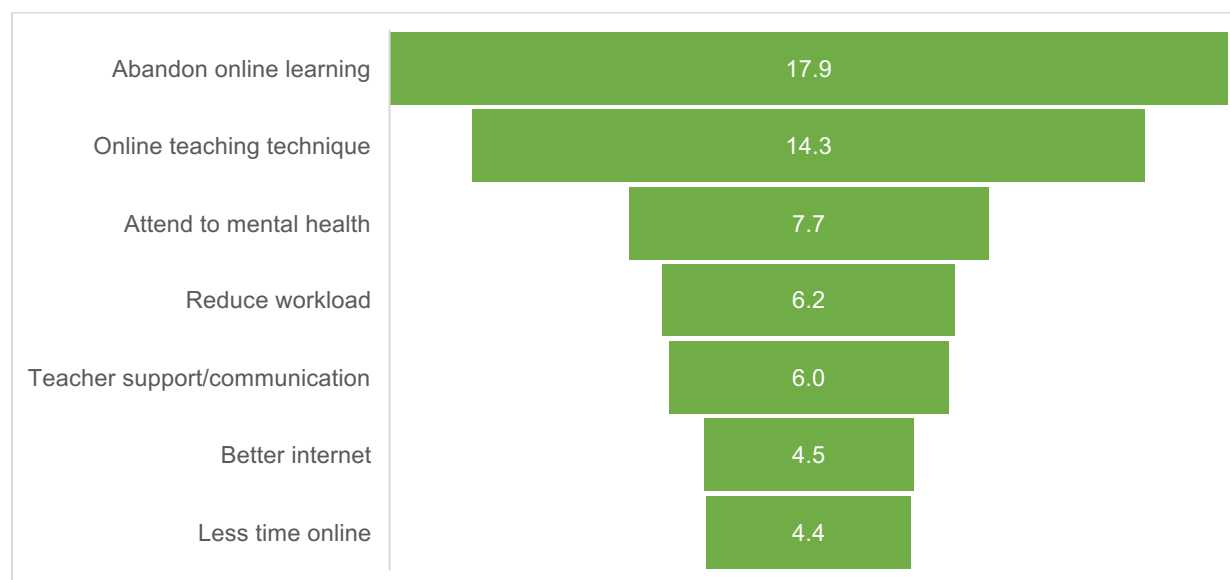|	
Abandon online learning	17.9
Online teaching technique	14.3
Attend to mental health	7.7
Reduce workload	6.2
Teacher support/communication	6.0
Better internet	4.5
Less time online	4.4

Figure 12 – Proportion of Responses

Several students prefaced their suggestions by acknowledging they understood why online learning had been implemented. Even so, it is not entirely surprising that their suggestion to abandon it outright would be a quick and obvious solution given the list of challenges students identified. It is also unsurprising that students suggested improvements to online teaching techniques given that this method of teaching and learning was largely new for teachers and students alike. Students also suggested improvements they felt would alleviate some of the difficulties shown in Figure 8 related to their sense of well-being. For example, students would have preferred more regular communication with teachers, open discussions about non-academic topics to improve engagement, and strategies for students to check-in on each other. In many cases, students' suggestions reflected a return to the in-person school experience that occurs organically and continuously between adults and students in school settings, further explaining why abandoning online learning seemed a reasonable improvement strategy. Lastly, students recommended that the balance of online and offline learning needed to be adjusted – poor or unreliable internet connectivity would understandably frustrate students' efforts to participate in synchronous sessions and complete required assignments within a reasonable time frame.

Key Takeaways from the Student Survey

Student voice is an important element in providing meaningful, responsive school experiences for students. While much of the cumulative research on school during the COVID-19 pandemic has focused on the effects of school disruptions on students,

relatively little research has stemmed from students themselves, and if so, in localized contexts only; thus, the need to include a province-wide student perspective as one of the key tools in future discussion, problem-solving, and potential policy development.

When reflecting on survey responses holistically, the following warrant due consideration:

1. Access to technology and reliable internet are essential elements for online learning. Most students were largely satisfied with the technology tools available to them. Satisfaction with access to reliable internet was less consistent across the province, possibly because school bandwidth is de facto stronger than household bandwidth available to students learning at home. It is worth noting that students with the least reliable home internet services were unlikely to respond due to the survey being online only.
2. It is reasonable to believe that learning online, especially under conditions imposed by the pandemic, is a relatively new experience for most students. As such, prior experience with online learning would not account for the various challenges and successes reported by students in this survey:

Challenges	Successes
• Accessing teacher and peer support as needed • Collaborating with peers • Maintaining focus, attention and motivation when working alone • Lack of social interaction with peers	• Learning at a more self-directed pace • Greater flexibility in time management • Sense of security and safety learning in familial spaces

3. The comparatively large number of student groups who reported online learning *Didn't Work* for them suggests (or arguably reinforces) that students were inequitably impacted by mandatory remote/online learning across the province.
4. While the survey did not probe students' mental health directly, their combined comments help explain how *Abandon Online Learning* and *Attending to Mental Health* were among the top three pressing suggestions for improving online learning. Students were direct in expressing their frustration, stress, worry and exhaustion. One student's summary comments are paraphrased below:

> *Maybe online is good for some but I think for the majority this past year has been super frustrating and it's a miracle we got our credits.*

Next Steps

The results of this Grades 5 to 12 student survey add important student voice to the discussion about online learning during the pandemic and supplements first-hand observations collected as part of the *Transitioning from the COVID-19 School Experience* discussion paper. OPSBA is also gathering additional community and parent/guardian input by way of an online survey which was launched in early August 2021. A real-time dashboard has been created to provide survey participants with a sense of the cumulative responses.

OPSBA is using all of this information to inform the discussion with education partners between June 2021 to January 2022. This discussion is designed to generate recommendations advocating policy changes and funding decisions during the transition to "school reimagined" beyond the pandemic.