

Effects of School Closures During the COVID-19 Pandemic on Achievement Gaps and Learning Inequalities Policy Implications



POLICY BENCH

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Effects of School Closures During the COVID-19 Pandemic on Achievement Gaps and Learning Inequalities: Policy Implications

1.0 Introduction

Growing evidence consistently shows that the COVID-19 pandemic will have lasting effects on children and youth and that school closures during 2020 and 2021 will impact students' academic achievement. Achievement gaps between students of different backgrounds and skill levels are expected to increase further as a result of repeated school closures, unless innovative solutions and remedial strategies are implemented to help students recover from the loss of learning.

A review of the literature on the effects of school closures on achievement gaps prior to and during the pandemic is available in the accompanying full report (*Effects of School Closures During the COVID-19 Pandemic on Achievement Gap and Learning Inequalities: Literature Review*). This brief presents some implications of the impact of pandemic-related school closures for schools, teachers, students, and educational systems as we move forward into the post-pandemic period. This includes both short-term and long-term interventions along with broader strategies that may help to promote achievement and reduce educational inequalities. Some examples of proposed programs or interventions are also provided to inform the development of similar strategies in Canada.

2.0 Broad strategies to enhance the recovery of learning losses after school closures

School closures during the COVID-19 pandemic have significantly disrupted students' educational progress throughout the past two years, lasting 26 weeks or more for some Canadian students. Teachers and parents have consistently reported that students learn better in person than online, and virtual instruction remains inaccessible or ineffective for many students (Gallagher-Mackay et al., 2021a). Recent evidence supports concerns that the longer the school closures continue, the farther behind students will be academically and the greater the achievement gaps, with the consequences potentially extending to affect their long-term educational outcomes and trajectories (ibid.; UNESCO, 2021). Moreover, a central finding across the literature is that there is considerable variability in students' educational experiences and outcomes, and that most often, students facing social disadvantages such as poverty, disability, racialized or Indigenous status have had greater challenges during the pandemic – raising significant issues for educational equity.

Therefore, the first priority for many researchers, health practitioners, educators and families to help mitigate the negative consequences of pandemic-related school closures is for face-to-face schooling to re-open and remain open without interruptions wherever possible.

 Re-opening schools for all students will allow for in-person instruction and interaction to take place and for school-based supports and resources to be available and accessible to all students. • However, a return to in-person schooling must still occur in accordance with strict public health guidelines and in conjunction with accelerated vaccination efforts to help ensure the safety of students and staff.

During the periods of school closures throughout the pandemic, children and youth have also lacked opportunities for school-based programs and extracurricular activities – which are critical for their development, health and well-being (People for Education, 2021). Children have always had differential access to these types of resources and experiences outside of school, depending on their home environment (Lareau, 2015); however, evidence suggests that COVID-19 has worsened these existing opportunity gaps (Statistics Canada, 2021). Therefore, over the course of this summer and as students return to school in the fall of 2021, it will be even more important for schools to not only address gaps in learning following school closures, but to also provide a variety of opportunities for enriched experiential learning and highly engaging activities – especially for students from disadvantaged backgrounds – in order to reduce inequalities that may have widened during the closures.

- This may include efforts to provide more opportunities for student activities, performances, labs, and training or enrichment programs to support children's development and foster engagement and motivation among students.
- However, strategies are also needed to ensure that teachers and schools have appropriate funding and resources to support their involvement in providing these extracurricular activities.

3.0 Efforts to improve the effectiveness of virtual instruction

While continuous in-person learning would be an important first step in a broader approach to help students recover from the loss of learning during the pandemic, alternative instruction methods should also be given consideration in any planning strategies for the following school year(s). If virtual/remote learning is to continue (i.e. in exceptional cases or in the event of unexpected future school disruptions), then greater supports and resources will be needed to improve the experience and effectiveness of this mode of instruction for all students, regardless



of their home learning environment (Schult et al., 2021).

The pandemic has also highlighted concerns over the 'digital divide' – which refers to unequal access to technological resources, educational supports and opportunities between households and families. In Canada, the lack of a national digital literacy strategy has resulted in wide variation in digital skills across provinces, school boards, and students

(Hadziristic, 2017). Therefore, as noted by some researchers (e.g. Zancajo, 2020), the potential success of online learning depends on the capacity of educational policies to address and reduce social inequalities in its delivery. This means not only ensuring that learning and instruction can continue even in the case of school closures, but also that it remains consistent and accessible for all students and across schools.

Key policy considerations to support virtual instruction include:

- The provision of reliable digital infrastructure for schools;
- Training for teachers in appropriate and effective use of remote learning technologies and best practices; and
- Support for parents and families to improve access and equity in the use of virtual instruction. This includes ensuring that students have the necessary tools and supports to engage with online learning at home if necessary (e.g. laptops, tablets, stable internet connection) and helpful guidance for using specific platforms and technologies.
 - o In addition, initiatives to provide multi-lingual online learning resources to reach students who may face language barriers would help to enhance the accessibility of learning materials and foster engagement and inclusion among diverse student groups (OECD, 2020).

It is also important to engage parents in the online learning process so that parents be more actively involved in their children's schooling, and to provide education around issues of safety and risks associated with online activity (Hill & Gayle, 2020). However, while it is important for parents to be supportive and involved, there must also be a balance with sufficient supports in place so that parents are not tasked with the additional burden and stress of having to teach online content themselves.

- Indeed, evidence from Canada demonstrates that a lack of balance has increased psychological distress for parents. Findings from a longitudinal study of Canadian mothers shows an increased prevalence of depression and anxiety during the COVID-19 pandemic, with larger increases for women who had income disruptions, those who had difficulty obtaining childcare and difficulty balancing home schooling with work responsibilities (Racine et al., 2021). Findings from a survey of U.S. households conducted in March-April 2020 showed that parents with children who struggled with distance learning experienced elevated mental distress (Davis et al., 2020). Specifically, parents with at least one child struggling (about 51% of all parents surveyed) were more likely than other parents to report feeling anxiety, depression, and having trouble sleeping.
- Canadian researchers have suggested that supplementary interventions during the summer (see Section 5d) specifically, in-person opportunities would help shift some of the load of children's learning off parents, who may be struggling to catch up on their own work (Aurini & Davies, 2021).

Finally, more research on experiences with and effectiveness of virtual instruction for different students is needed to inform the development of more successful hybrid learning models and strategies (e.g. which activities to prioritize for in-classroom instruction; how to switch between teaching modes without disruption) (Dorn et al., 2020).

4.0 Enhanced social and emotional supports for students, families and teachers

Besides the immediate need for continued schooling and effective instruction strategies, there is also a need for enhanced, sustained support for children and their families, as well as their instructors to begin to mitigate the negative social, emotional, and educational consequences of pandemic-related school closures. This includes a focus on improving mental health and social supports both in schools and outside of schools, as well as better connections between schools and community-based services.

4.1 Mental health supports and resources:

- The consequences of the COVID-19 pandemic including prolonged school closures and social isolation have affected students' mental health, which has further implications for their academic success (Loades et al., 2020; Keels et al., 2021). Therefore, policies and interventions to improve academic achievement should also include a focus on helping students to recover from these psychosocial effects. This includes further, targeted investment into mental health supports and resources to help children and their families cope with the disruption and stress caused by the pandemic; as well as training for teachers and educators to help them understand, identify, and respond to students' social and emotional needs particularly in schools with a higher proportion of at-risk students (Keels et al., 2021, UNESCO et al., 2020).
- The unpredictability and unprecedented nature of the COVID-19 pandemic has affected not only children, but also the educators that have struggled to adapt to new methods of teaching and connecting with their students throughout school closures. A survey of over 13,000 Canadian educators conducted in October 2020 revealed high levels of occupational stress, anxiety, and struggles to cope with the daily stresses of teaching. For example, 69% of teachers reported concerns about their own mental health and well-being an increase of 25% since the previous survey in June 2020 (Canadian Teachers Federation, 2020). Given that teachers are essential



for students' academic success, there is a need for institutional policies and supports to help teachers manage the challenges and stress of working through the COVID-19 crisis, such as investments in staff mental health and professional development opportunities, as well as addressing working conditions and job demands that increase stress and burnout among teachers.

• Finally, students' academic success also depends on parents' emotional health, which affects their learning environment. Therefore, research also suggests that mental health resources are needed to help support parents who have taken on new roles as proxy educators during school closures and distance learning (Davis et al., 2020).

Canadian Spotlight: Mental Health Support

An example of an existing program in Ontario that aims to serve each of these key needs for mental health support is SCHOOL Mental Health (SMH) ASSIST – a provincial team designed to help school boards build greater capacity to support student mental health and well-being. The program works with the Ministry of Education and provincial education and health authorities to provide evidence-based information, services and resources for educators, students, parents and families, including a focus on mental health promotion and prevention.

4.2 Social support and relationships:

- One of the unintended effects of pandemic-related school closures is the loss of a key source of social connections and engagement for students and families, which may adversely affect mental health and school connectedness (Dove et al., 2020). School connectedness refers to a sense of belonging to the school community and environment and is associated with many benefits including academic achievement, attendance, graduation, and fewer risk-taking behaviours (CDC, 2018).
- Research on the social determinants of health also shows the importance of social support and healthy, safe environments, including schools and communities for children's health and well-being (ODPHP, 2020). Therefore, students' learning benefits from having stable and caring relationships with teachers, especially in the aftermath of the pandemic (Keels et al., 2021). While in-person schooling would provide the greatest opportunity for interactions between teachers and students, relationships can also be enhanced in the context of online learning through more real-time or 'live' interactions during the school day (Aurini & Davies, 2021).
- The involvement of parents and members of the community in students' education is also essential in helping schools and students to recover from the impacts of the pandemic (Mundy & Gallagher-Mackay, 2021). Evidence from research conducted early in the pandemic (Domina et al., 2021) suggests that regular communication between schools and families and among parents within a school community can help to increase student engagement and reduce social isolation particularly when remote learning is in place.

5.0 Potential short-term remediation strategies

In addition to broad policies and supports, some researchers have proposed more specific short-term remediation strategies that aim to improve academic performance and help students recover from the loss of learning time during the pandemic – especially for disadvantaged and low-achieving students. Examples of compensatory strategies include:

- a) Modifying the academic calendar to extend learning time when students return to school, to help make up for lost instructional time during school closures
 - Studies on the impact of lost instructional time prior to the pandemic have shown an association between missing school days due to individual absences or unexpected school closures and lower academic performance (see Section 3 of the Literature Review document). These findings, along with evidence showing a positive association between instructional time and achievement, suggest that increasing the number of school hours or days in the academic year may be an effective strategy to improve academic outcomes (i.e. assessment scores, percentage of students meeting grade-level expectations) (Marcotte, 2007; Marcotte & Hansen, 2010). In the context of the COVID-19 pandemic, proposed strategies have included: increasing the length of each school day, adding an extra hour of instruction per week, adding classes on weekends or holidays, or instituting a longer than normal school year in the first year or two following the pandemic, to make up for missed school days in the previous year.
 - However, any consideration of such a policy must also take into account the
 additional financial costs of keeping schools open longer and the impact on teachers
 and families who must adjust to increased schooling time. For example, one estimate
 indicates that additional instruction time equivalent to well over two hours per week
 for more than a year would be required in order to compensate for each week of
 schooling lost during COVID-19 (Eyles et al., 2020).
 - Furthermore, simply extending the academic year or adding extra time for instruction on its own may not be effective; additional strategies, including enhanced supports for students, would be needed to ensure those extra days have the maximum impact on learning and achievement (Marcotte & Hansen, 2010; Allensworth & Schwartz, 2020). Indeed, there is evidence from the US that year-round schooling does not improve achievement for disadvantaged students (Atteberry & McEachin, 2021). Some researchers have suggested that rather than extending the school calendar, policies that focus on making better use of existing instruction time would be more effective (Aucejo & Romano, 2016).
- b) Enhanced accommodations for testing and assessments during and post-pandemic, along with efforts to continue to collect and assess any available data on student performance
 - Studies that have examined the effects of weather-related school closures prior to COVID-19 have suggested that in years when students experience a higher than average number of school closures, school boards should consider rescheduling exams or annual assessments to adjust for the impact of lost instructional time (Marcotte, 2007). In the context of the COVID-19 pandemic, similar approaches could include: cancelling annual assessments, offering alternative testing methods

(e.g. remote testing), waiving exams, adjusting the course curriculum and grading method to account for missed exams, and revising policies and requirements for inclusion into special programs, courses, or placements to eliminate barriers for less advantaged students (UNESCO et al., 2020).

Canadian Spotlight: Standardised Testing

Assessment strategies during COVID-19 have varied across provinces and school boards. For example:

- In Ontario, standardised assessments administered by the Education Quality and Accountability Office (EQAO) were cancelled in 2020 and 2021 for elementary school students and secondary school tests in literacy and math have pivoted to online versions, with results not being used in the determination of student's final grades or graduation requirements.
- In British Columbia, the annual Foundation Skills Assessments for students in grades 4 and 7 was postponed from the fall of 2020 but took place in January-February 2021.
- However, any cancellations of standardised testing would have additional implications that must also be considered in policy planning. For instance, valid assessment data can be used to evaluate school or district level interventions, to support instructional planning, to measure achievement gaps, and to identify students who be eligible for specialized programs or who are in need of additional learning support (Schweig et al., 2021). A lack of data on how students are performing during and following school closures especially data for more disadvantaged students will limit the ability of educators and policymakers to understand the impact of the pandemic on achievement and to develop effective remediation strategies. Therefore, in the absence of standardised testing during the pandemic, alternative assessment strategies may need to be developed or relied on (e.g. using report card grades, more reliance on formative assessments and evaluations by teachers).



International Example: Data Collection Strategies

The UNESCO Institute for Statistics (2020) has recommended the following data collection strategies to measure and track student learning and performance in the context of the COVID-19 pandemic:

- 1) rapid data collection focusing on only a few key indicators and sampling schools and students rather than entire education systems
- 2) oversampling vulnerable students (i.e. students in poverty, students with disabilities or accessing special education services, minority or linguistic groups) to monitor equity
- 3) frequent and low-stakes measurement
- c) Tiered strategies that include more targeted supports for individual students and personalized instruction to address increased variability in learning and skill levels between students after school closures
 - Evidence suggests that the magnitude of learning losses during the pandemic will differ across students, so that when students return to school next year after prolonged periods of closure, there may be greater variability across students in the range of academic skills and performance levels relative to a normal school year depending on students' access to parent and teacher learning supports during school closures (Kuhfield et al., 2020a; Gallagher-Mackay et al., 2021a). This finding suggests that teachers may need to adapt their instruction in ways that meet the needs of students with a range of abilities and skill levels. However, additional training and assessment methods may be needed to support teachers in continuing to identify and accommodate these needs.
 - One approach to addressing this variability is a tiered strategy, whereby schools provide broad-based supports for all students combined with intensive interventions for students with the greatest learning losses (Lynch & Hill, 2020). An example is the *multi-tiered systems of support* (MTSS) model which has been proposed as a roadmap for the re-opening of schools (Kearney & Childs, 2021). MTSS models represent an ecological approach to assessment and intervention strategies that address a range of individual student needs across multiple interconnected domains of functioning (i.e. academic, social, behavioural). The three tiers of supports included in the model are: 1) universal strategies focus on broad schoolwide practices; 2) early intervention or prevention strategies which provide targeted services to students and families in need of greater support; and 3) intensive interventions and services to address more severe or chronic issues. Examples of how this model could be applied during the return to school following pandemic-related school closures is provided in Table 1.

International Example: Tiered Support Strategies

Table 1: Multi-tiered systems of support (MTSS) model as applied to the academic domain following COVID-19 school shutdowns (adapted from Kearney & Childs, 2021)

| 2021) | | | | |
|--------------------------------------|---|---|--|--|
| Tier | Timeline | Approach | | |
| Tier 1: Universal intervention | Implemented over an initial 4-8 week integration period as students return to inperson instruction Conducted on a rolling basis if students re-enter school at different times | Focus on low-stakes academic assignments to allow students to readjust and transition to higher-stakes academic work Prioritize flexibility in evaluation methods Includes universal screening methods to identify students that may require remediation and/or Tier 2 intervention | | |
| Tier 2: Targeted intervention | Implemented both during Tier 1 and afterwards as needed | Emphasize and expand accommodation plans to boost academic performance and school attendance (e.g. provide extra supports, alter class schedules; modify work requirements, provide time and space for counseling) | | |
| Tier 3: Intensive intervention | Implemented both during Tiers 1 and 2 and afterwards as appropriate | Focus on providing outreach to students and families who are likely to remain disconnected from in-person schooling for an extended time Involves highly flexible educational practices and evaluations Emphasis on school-community partnerships to increase mental health and academic supports | | |

• Another example of a targeted approach is tutoring programs provided to individual students or small groups in conjunction with regular instruction. Consistent evidence has shown the effectiveness of tutoring programs for improving learning and other academic outcomes (Nickow, Oreopoulos & Quan, 2020; Gallagher-Mackay et al., 2021b). A modelling study predicting COVID-19 learning losses estimated that intensive school interventions such as tutoring could ameliorate the effects of a three-month school closure. Specifically, an intervention with the same effect size as tutoring – if implemented by third grade, was estimated to substantially reduce (although not fully eliminate) the effects of a learning loss in prekindergarten (Blagg, 2021).

Some researchers have identified high-dosage tutoring (HDT) as a promising method to help students overcome learning losses resulting from COVID-19 school closures. According to Kraft & Goldstein (2020), this method has several advantages over regular tutoring, especially in the context of COVID-19 recovery (see Table 2). However, HDT is not commonly used in Canada.

| Benefits | Description | |
|---|---|--|
| One-on-one relationships | Tutors work full time with the same students at a single school throughout the school year | |
| Universality | HDT is offered as a universal program for all students at a school, not just to those who are struggling, which reduces potential stigma associated with tutoring programs | |
| Incorporation into daily school routine | HDT occurs daily as part of the normal school day and is treated like a regular class, with students receiving a grade for performance. This helps to improve participation and consistency | |
| Personalized | Students receive personal attention from a low student-to-tutor ratio (1-1 or 2-1) | |
| Focus on math | HDT is most effective in stimulating learning gains in math, where learning loss may be more severe | |

d) Enhanced investment and participation in learning programs offered outside of regular school hours, including over the summer break, after school or on weekends

- Evidence conducted prior to the COVID-19 pandemic has shown that achievement gaps tend to widen over the summer break when schools are not in session, and that summer learning programs (SLPs) can be effective in reducing achievement gaps between students (Davies et al., 2015; Aurini & Davies, 2021). A greater focus on SLPs may be even more important now following extended school closures during the pandemic, particularly for more disadvantaged students. Such programs can support these students' learning outside of the classroom by supplementing academics with additional enrichment experiences and physical activity (Alexander, 2001). In Ontario, SLPs have also been shown to be relatively inexpensive and popular with both students and parents (Aurini & Davies, 2021).
- Evidence from the US indicates that key factors in effective summer learning programs include the duration (i.e. programs lasting at least 5 weeks), smaller class size (i.e. fewer than 15 students), strong attendance, high quality curriculum, and enrichment activities (McCombs & Augustine, 2021). Canadian researchers have also suggested that high-quality and targeted summer programs that provide healthy food and recreational activities in addition to academic instruction in literacy and

math could produce positive benefits for both children and parents and help to reduce achievement gaps (Vaillancourt et al., 2021). Another strategy could involve working with agencies that run summer camps to add academics to their activities, for example by hiring volunteer tutors (Dorn et al., 2020).

Canadian Spotlight: Summer Learning Programs (SLPs)

In Ontario, the Council of Ontario Directors of Education (2021) reported positive results from the 2020 SLP¹ which was offered to primary school students in an online only format for the first time, with 71 out of 72 district school boards participating. Student participation in the program was greater than in any other year, due to an increase in funding and in the number of classes offered, and boards reported gains in student achievement in literacy and numeracy. The success of the 2020 SLP after pivoting to new teaching methods suggests that SLPs will remain essential for minimizing learning loss in 2021 as well. However, the Council recommended that flexibility for school boards in choosing and developing the most appropriate learning mode and the continuation of virtual learning opportunities are key considerations for ensuring future success.

- e) Efforts to reach students who have disengaged from school during the pandemic to reintegrate them, boost attendance and enrollment and reduce dropout rates
 - School interruptions combined with increased financial stress due to the COVID-19 pandemic may lead more parents to keep their children home from school longer or older students to drop out of school and not return when schools re-open particularly students who were already struggling before the pandemic (e.g. students with disabilities, students with English as a second language). Globally, almost 7 million children are estimated to drop out from school due to COVID-19 (Azevedo et al., 2020).
 - Dropout risk is greater in developing countries where the opportunity cost of staying in school is higher (Lichand et al., 2021; Azevedo et al., 2020). For example, a study from Brazil found that dropout risk increased by 365% for secondary students during school closures (Lichand et al., 2021). Given that learning outcomes are already lower in developing countries, the impact of pandemic may be especially costly for students in these countries and may reverse decades of efforts to improve educational outcomes and school enrollment rates (Lichand et al., 2021).
 - Even in high-income countries such as Canada, student disengagement due to repeated school closures and online learning has raised concerns among educators. While large-scale Canadian data on student attendance during the pandemic is not available, reports indicate that some teachers have noticed greater absences and more students being withdrawn or drifting away from school participation

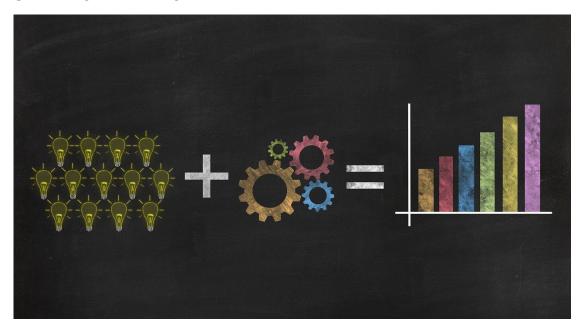
¹ Since 2010, the Council of Ontario Directors of Education has offered the Summer Learning Program (SLP) for students in primary grades, with funding from the Ministry of Education. Boards may invite students who are currently registered in Senior Kindergarten or grades 1-5 to participate, with preference to students experiencing achievement gaps or social and economic challenges. The program is offered for a minimum of three weeks over the summer, with instruction in literacy and numeracy daily or at least half a day (or the equivalent of 45 hours of instruction).

(Subramanian, 2021; Wong, 2021). Reasons for disengagement or dropping out during COVID-19 may include a lack of connectivity to peers, teachers and mentors, loss of extra-curricular activities, additional psychosocial impacts of the pandemic, family financial stress, and limited access to online learning. Identifying and connecting with these students will be crucial to help re-engage and reintegrate them into schools to prevent further learning loss and other negative educational outcomes such as dropout. This may include a combination of any of the above strategies discussed in this section (Subramanian, 2021).

• Some evidence also suggests that kindergarten enrollment rates have dropped during the pandemic, which may affect both achievement gaps and long-term educational trajectories such as high school graduation rates. In the US, the largest declines in public school enrollment during the pandemic have been observed in the youngest grades (kindergarten and prekindergarten) (Bassok & Shapiro, 2021). Some reports from Canadian school jurisdictions also suggest a similar trend of lower kindergarten enrollments in the 2020-21 school year compared to previous years (Slugoski, 2021). Given the importance of early learning experiences for future educational outcomes (e.g. school readiness, high school graduation), as well as other benefits that can help reduce achievement gaps such as access to school-based supports and relationships, there is a strong need for strategies to boost school engagement and enrollment among younger children and their families.

6.0 Long-term educational strategies

The extent and scale of the consequences of school closures during the pandemic is not yet known, but there may be a long-lasting impact on student achievement and educational outcomes beyond the initial post-pandemic period. Educators and policymakers should take advantage of this current opportunity to examine the ways that schools and school closures affect student achievement and begin to plan for longer-term solutions that will enhance equity in education to reduce achievement gaps. Some areas of focus among proposed long-term strategies include:



- a) Overall improvement of educational systems to "build back better"
 - Some researchers have noted that returning to the status quo (i.e. pre-pandemic schooling systems) will not be enough to offset the effects of pandemic-related school closures; rather, there is need to improve school systems in order to see improvements in academic achievement and other educational outcomes (Hanushek & Woessmann, 2020; World Bank, 2020; Mundy & Gallagher-Mackay, 2021). Longterm improvement strategies should be included in remediation plans in addition to the short-term efforts discussed above, in order to build more resilient, accessible, inclusive, and efficient education systems (Azevedo, 2020; Kaffenberger, 2021). This could include incorporating alternative learning pathways, altering assessment systems and methods, adjusting or reforming the curriculum to better match children's current learning levels, and providing new and ongoing forms of support (Kaffenberger, 2021).
- b) Addressing structural factors that contribute to disparities in educational opportunities and outcomes by social class and race
 - Evidence from Canada and the US shows that students from disadvantaged backgrounds (i.e. low-income, minorities, students from immigrant families) tend to have lower access to educational and enrichment opportunities and resources (Gallagher-Mackay, 2017; Garcia & Weiss, 2020). Therefore, part of the approach to rethinking school systems should include a focus on closing the opportunity gaps that serve as barriers to academic progress for students from disadvantaged backgrounds (James, 2020).
 - Educational policies must acknowledge the structural factors that can impede learning progress, such as systemic racism and discrimination, and ensure that all children have access to the conditions, resources, and opportunities that can enhance their learning and development (Garcia & Weiss, 2020).
- c) Greater variety in the types of learning opportunities offered in schools
 - According to some researchers, students should be provided with more holistic learning opportunities that include a focus on social and emotional learning (SEL) to support their development in other ways besides or in addition to the traditional academic development approach (Domina et al., 2021; CASEL, 2020). Incorporating school-based socio-emotional learning interventions may have a positive impact on student well-being; help to create safe, predictable classroom environments; and improve cognitive performance and academic outcomes (Allensworth & Schwartz, 2020). This may be especially important in the post-pandemic recovery period, given the social and emotional consequences of the pandemic and associated school closures on children and their families.
 - In the US, the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020) developed a roadmap in 2020 for re-opening schools with equity-focused SEL strategies. The four critical practices for schools are described in Table 3.

Table 3: SEL critical practices for re-opening schools (Source: CASEL, 2020)

| Practice | Description |
|---|--|
| Take time to cultivate and deepen relationships, build partnerships, and plan for SEL | Prioritize relationships that haven't been established, engage in two-way communication with members of the school community, and build coalitions to effectively plan for safe, supportive and equitable learning environments that promote social, emotional, and academic learning for all students |
| Design opportunities where adults can connect, heal, and build their capacity to support students | Help adults feel connected, empowered, supported, and valued by cultivating collective self-care and wellbeing, providing ongoing professional learning, ensuring access to mental health supports, and creating space for adults to process and learn from their experiences |
| Create safe, supportive, and equitable learning environments that promote all students' social and emotional development | Ensure all students feel a sense of belonging; have consistent opportunities to learn about, reflect on, and practice SEL; and access needed support through school or community partners, including trusting adult-student relationships |
| Use data as an opportunity to share power, deepen relationships, and continuously improve support for students, families, and staff | Collect data to monitor needs and assess progress towards SEL goals; partner with students, families, staff and community partners to learn about students' and adults' ongoing needs and strengths, and continuously improve SEL and transition effort |

Canadian Spotlight: *SEL Programs*

In British Columbia, free virtual education programs to support social and emotional health and well-being of students learning at home during the pandemic were launched in 2020, as adaptations of existing school-based programs (Government of BC, 2020). This includes the <u>WE Well-being program</u> (part of WE Schools @home), which provides educators with online resources to help youth in grades K-12 who are experiencing anxiety and social isolation; and the <u>EASE (Everyday Anxiety Strategies for Educators) at Home</u> program, which provides research-based activities and strategies for parents and caregivers to help younger children learn techniques to support their mental health and resilience.

- d) Systems to monitor student academic achievement following COVID-19 school closures to enhance evaluation efforts
 - A monitoring system is an important part of a multi-component return-to-school strategy which would help to boost the benefits of other remediation efforts. As mentioned earlier, any targeted or tiered approaches to support students with different needs as they return to the classroom must begin by identifying those needs through some form of assessment of learning levels and skills. This should include a focus on continued standardised testing or sample-based assessments to fill data gaps on student achievement and other educational outcomes during and post-pandemic. It may also require new approaches beyond the typical standardised testing methods in order to assess competencies across a broader range of domains, in a more equitable and unbiased way (Garcia & Weiss, 2020).
- e) Contingency plans to prevent further disruptions to schooling which could exacerbate academic inequalities
 - Finally, an important part of a long-term strategy moving forward is to develop clear guidance in the event of further changes to the ongoing COVID-19 crisis or even future pandemics or events of a similar nature that may disrupt in-person schooling, so that schools, teachers, students and parents are better prepared to manage the disruption and can avoid further consequences on achievement gaps.

7.0 Summary

The available evidence on school closures before and during the COVID-19 pandemic points to the need for enhanced policies that will help to not only offset the learning losses and achievement gaps that have grown as a result of pandemic school closures, but that will also support the development and academic success of all children and youth as they transition into a new school year. Enabling a return to in-person learning for all students without additional interruptions or shutdowns will be an important first step in efforts to prevent further learning loss. As governments and educators move to ensure schools are able to open safely and in accordance with public health guidelines, there is also a need to ensure that equitable and accessible learning opportunities are available for all students regardless of whether instruction takes place in-person or remotely, and that appropriate supports and resources are in place to help students, teachers, and families to navigate new systems successfully. This includes recognizing the range of learning abilities and specific needs across students and schools following school closures and providing targeted interventions where needed to help the students who are more at risk of falling behind. It will also require a collaborative effort involving parents and communities in the learning process to enhance the benefits of schooling (Alexander, 2001).

However, as some researchers have noted, there is likely no single solution or intervention that will be sufficient on its own to help children and youth recover from the effects of the pandemic (Alexander, 2001; EEF, 2020). Instead, a combination of short-term remediation strategies combined with enhanced supports for students and teachers as well as long-term

improvements to education systems may be needed to help reduce achievement gaps and maintain equity moving forward.

It should be noted that these strategies will require significant commitment, funding, and planning by governments and educational systems. Other countries, such as the Netherlands, US, and Britain have already committed considerable funding towards educational recovery, yet Canada is currently falling behind in efforts to provide meaningful investments that would address the learning losses and achievement gaps resulting from COVID-19 school closures (Dhuey & Gallagher-Mackay, 2021; Mundy & Gallagher-Mackay 2021).

Finally, given the lack of large-scale Canadian data on the effects of pandemic-related school closures on academic achievement and educational inequality, there is a need for enhanced efforts to measure and evaluate student achievement following school closures, as well as continued monitoring of the impact of interventions and policies to reduce achievement gaps. Data could be compared across jurisdictions or provinces that have differed in their approach to school closures (e.g. in-person vs. remote; and across different models of online learning); and should be collected and reported by sociodemographic factors such as age, race, Indigenous status, disability and family income in order to assess equity impacts (Gallagher-Mackay, 2020).

8.0 References

Alexander, K.L., Entwisle, D.R., & Olson, L.S. (2001). Schools, achievement, and inequality: a seasonal perspective. *Educational Evaluation and Policy Analysis*, 23(2):171-191.

Allensworth, E. & Schwartz, N. (2020). School practices to address student learning loss. EdResearch for Recovery Project. Brief No. 1. Accessed at: https://annenberg.brown.edu/sites/default/files/EdResearch for Recovery Brief 1.pdf

Atteberry, A. & McEachin, A. (2021). School's out: the role of summers in understanding achievement disparities. *American Education Research Journal*, 58(2):239-282.

Aucejo, E. M., and Romano, T. F. (2016). Assessing the effect of school days and absences on test score performance. *Economics of Education Review*, 55, 70-87.

Aurini, J. & Davies, S. (2021). COVID-19 school closures and educational achievement gaps in Canada: extrapolations from Ontario summer learning research. *Canadian Review of Sociology*, 58(2):165-185.

Azevedo, J. P., Hasan, A., Goldemberg, D., Aroob Iqbal, S., & Geven, K. (2020). Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates. World Bank Policy Research Working Paper, 9284.

Bassock, D. & Shapiro, A. (2021). Understanding COVID-19-era enrollment drops among early-grade public school students. Brown Center Chalkboard, Brookings Institution. Accessed at: https://www.brookings.edu/blog/brown-center-chalkboard/2021/02/22/understanding-covid-19-era-enrollment-drops-among-early-grade-public-school-students/

Blagg, K. (2021). The effect of COVID-19 learning loss on adult outcomes: building a set of age-cohort projections using the social genome model. Washington, DC: Urban Institute.

Canadian Teachers Federation (2020). Teacher mental health check-in survey. Pandemic Research Report. Accessed at: https://vox.ctf-fce.ca/wp-content/uploads/2020/11/Doc-13-1-Pandemic-Research-Report-Teacher-Mental-Health-Check-in-Survey.pdf

CASEL (2020). Reunite, Renew, and Thrive: Social and Emotional Learning (SEL) roadmap for reopening school. Accessed at: https://casel.org/wp-content/uploads/2020/07/SEL-ROADMAP.pdf

Centers for Disease Control and Prevention (CDC) (2018). School connectedness. Accessed at: https://www.cdc.gov/healthyyouth/protective/school connectedness.htm

Council of Ontario Directors of Education (2021). Summer Learning Program 2020: A report prepared by the Council of Ontario Directors of Education. Accessed at: https://ontariosummerlearning.org/wp-content/uploads/2021/03/CODE-SLP Report 2020-1.pdf

Davies, S., Aurini, J., Milne, E., & Jean-Pierre, J. (2015). The effects of summer literacy programs: learning opportunity theory and "non-traditional" students in Ontario French language schools. *Canadian Journal of Sociology*, 40(2): 189-222.

Davis, C.R., Grooms, J., Ortega, A., Rubalcaba, J.AA., & Vargas, E. (2021). Distance learning and parental mental health during COVID-19. *Educational Researcher*, 50(1): 61-64.

Dhuey, E. & Gallagher-Mackay, K. (2021, June). School closures have been hard on students and the economy. Toronto Star. Accessed at:

https://www.thestar.com/opinion/contributors/2021/06/10/school-closures-have-bee-hard-on-students-and-the-economy.html

Domina, T., Renzulli, L., Murray, B., Garza, A.N., Perez, L. (2021). Remote or removed: predicting successful engagement with online learning during COVID-19. *Socius*. January 2021. doi:10.1177/2378023120988200

Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). COVID-19 and student learning in the United States: the hurt could last a lifetime. McKinsey & Company. Accessed at: https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19-and-student-learning-in-the-united-states-the-hurt-could-last-a-lifetime

Dove, N., Wong, J., Gustafson, R., & Corneil, T. (2020). Impact of school closures on learning, child and family well-being during the COVID-19 pandemic. BC Centre for Disease Control & BC Children's Hospital.

Education Endowment Foundation (2020). Impact of school closures on the attainment gap: rapid evidence assessment. London: Education Endowment Foundation.

Eyles, A., Gibbons, S., & Montebruno, P. (2020) *Covid-19 school shutdowns: what will they do to our children's education?* CEP Covid-19 Analysis (001). London School of Economics and Political Science, London, UK.

Gallagher-Mackay, K. (2017). Data infrastructure for studying equity of access to postsecondary education in Ontario. Toronto: Higher education quality council of Ontario.

Gallagher-Mackay, K. (2020, November). Are students and educators learning during the pandemic? Policy Options. Accessed at:

https://policyoptions.irpp.org/magazines/november-2020/are-students-and-educators-learning-during-the-pandemic/

Gallagher-Mackay K, Srivastava P, Underwood K, et al. (2021a). COVID-19 and education disruption in Ontario: emerging evidence on impacts. *Science Briefs of the Ontario COVID-19 Science Advisory Table.* 2021;2(34). https://doi.org/10.47326/ocsat.2021.02.34.1.0

Gallagher-Mackay, K., Feitosa de Britto, T., Asim, M. & Mundy, K. (2021b). Evidence review: tutoring as part of educational recovery post-COVID. Working paper, Diversity Institute (forthcoming).

Garcia, E. & Weiss, E. (2020). COVID-19 and student performance, equity, and U.S. education policy. Economic Policy Institute: Washington, DC. Accessed at: https://bit.ly/2SoSmo9

Government of B.C. (2020, April). More online options for students to support social, emotional well-being. BC Gov News. Accessed at:

https://news.gov.bc.ca/releases/2020EDUC0029-000709

Hadziristic T. (2017). The state of digital literacy in Canada: a literature review. Brookfield Institute for Innovation + Entrepreneurship. Accessed at:

https://brookfieldinstitute.ca/wp-content/uploads/BrookfieldInstitute State-of-Digital-Literacy-in-Canada Literature WorkingPaper.pdf

Hanushek, E.A. & Woessmann, L. (2020). The economic impacts of learning losses. *OECD Education Working Papers*, No. 225, OECD Publishing, Paris, https://doi.org/10.1787/21908d74-en.

Hill, N. & Gayle, L. (2020). Engaging parents and families to support the recovery of districts and schools. EdResearch for Recovery Project. Brief No. 12. Accessed at: https://annenberg.brown.edu/sites/default/files/EdResearch for Recovery Brief 12.pdf

James, C.E. (2020). Racial inequity, COID-19 and the education of Black and other marginalized students. Royal Society of Canada. Accessed at: https://rsc-src.ca/en/covid-19/impact-covid-19-in-racialized-communities/racial-inequity-covid-19-and-education-black-and

Kaffenberger M. (2021). Modelling the long-run learning impact of the Covid-19 learning shock: Actions to (more than) mitigate loss. *International Journal of Educational Development*, 81, 102326. https://doi.org/10.1016/j.ijedudev.2020.102326.

Kearney, C. A., & Childs, J. (2021). A multi-tiered systems of support blueprint for reopening schools following COVID-19 shutdown. *Children and Youth Services Review*, *122*, 105919.

Keels, M., Dinizulu, S., Parikh, S., & Jointer, T. (2021). Preparing schools to meet the needs of students coping with trauma and toxic stress. EdResearch for Recovery Project. Brief No. 17. Accessed at:

https://annenberg.brown.edu/sites/default/files/EdResearch for Recovery Brief 17.pdf

Kraft, M. & Goldstein, M. (2020). Getting tutoring right to reduce COVID-19 learning loss. Brown Center Chalkboard. Accessed at: https://www.brookings.edu/blog/brown-center-chalkboard/2020/05/21/getting-tutoring-right-to-reduce-covid-19-learning-loss/

Kuhfield, M., Soland, J., Tarasawa, B., Johnson, A., Ruzek, E., & Liu, J. (2020a). Projecting the potential impact of COVID-19 school closures on academic achievement. *Educational Researcher*. 2020;49(8):549-565.

Lareau, A. (2015). Cultural knowledge and social inequality. *American Sociological Review*, 80(1), 1–27.

Lichand, G., Alberto Dória, C., Leal Neto, O., & Coss, J. (2021). The impacts of remote learning in secondary education: evidence from Brazil during the pandemic. Available at SSRN: https://ssrn.com/abstract=3841775 or https://ssrn.com/abstract=3841775 or https://ssrn.com/abstract=3841775 or https://ssrn.com/abstract=3841775 or https://dx.doi.org/10.2139/ssrn.3841775

Loades, M.E., Chatburn, E., Higson-Sweeney, N., et al. (2020). Rapid systematic review: the impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child and Adolescent Psychiatry*, 59(11): 1218-1239.e3.

Lynch, K. & Hill, H. (2020). Broad-based academic supports for all students. EdResearch for Recovery Project, Brief No. 6. Accessed at:

https://annenberg.brown.edu/sites/default/files/EdResearch for Recovery Brief 6.pdf

Marcotte, D. (2007). Schooling and test scores: a mother-natural experiment. *Economics of Education Review*, 26(5):629-640.

Marcotte, D.E. & Hansen, B. (2010). Time for school? *Education Next*, 10(1):52-59.

McCombs, J. & Augustine, C. (2021). Advancing student learning and opportunity through voluntary academic summer learning programs. EdResearch for Recovery Design Principles Series. Accessed at:

https://annenberg.brown.edu/sites/default/files/EdResearch for Recovery Design Principles 2.pdf

Mundy, K. & Gallagher-Mackay, K. (2021). Learning our way out of the pandemic. EdCan Network. Accessed at: https://www.edcan.ca/articles/learning-our-way-out-of-the-pandemic/

Nickow, A., Oreopoulos, P., & Quan, V. (2020). The impressive effects of tutoring on PreK-12 learning: a systematic review and meta-analysis of the experimental evidence. National Bureau of Economic Research Working Paper Series. No. 27478. DOI: 10.3386/w27476

OECD (2020). The impact of COVID-19 on student equity and inclusion: Supporting vulnerable students during school closures and school re-openings. *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris. https://doi.org/10.1787/d593b5c8-en.

Office of Disease Prevention and Health Promotion (ODPHP) (2020). Social determinants of health. Accessed at: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

People for Education (2021). The far-reaching costs of losing extracurricular activities during COVID-19. Accessed at: https://peopleforeducation.ca/wp-

content/uploads/2021/04/People-for-Education-The-Cost-of-Losing-Extra-Curricular-Activities-April-2021.pdf

Racine, N., Hetherington, E., McArthur, B.A., et al. (2021). Maternal depressive and anxiety symptoms before and during the COVID-19 pandemic in Canada: a longitudinal analysis. *The Lancet Psychiatry*, 8(5): P405-415.

Schult, J., Mahler, N., Fauth, B., & Lindner, M.A. (2021). Did students learn less during the COVID-19 pandemic? Reading and mathematics competencies before and after the first pandemic wave. PsyArXiv. March 11. doi:10.31234/osf.io/pqtgf.

Schweig, J., Mceachin, A., Kuhfeld, M., Mariano, L. T., & Diliberti, M.K. (2021). Adapting course placement processes in response to COVID-19 disruptions. Santa Monica, CA: RAND Corporation, 2021. https://www.rand.org/pubs/research_reports/RRA1037-1.html

Slugoski, K. (2021, March). Educator urges parents to enrol their children in kindergarten. Global News. Accessed at: https://globalnews.ca/news/7705132/educators-children-kindergarten/

Subramanian, S. (2021, June). The lost year in education. Macleans magazine. Accessed at: https://www.macleans.ca/longforms/covid-19-pandemic-disrupted-schooling-impact/

Statistics Canada (2021). School closures and COVID-19: Interactive tool. Accessed at: https://www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2021009-eng.htm

UNESCO, United Nations Children's Fund, World Bank, & World Food Programme. (2020). Framework for reopening schools. Accessed at:

https://unesdoc.unesco.org/ark:/48223/pf0000373348

UNESCO (2021). One year into COVID-19 education disruption: where do we stand? Accessed at: https://en.unesco.org/news/one-year-covid-19-education-disruption-where-do-we-stand

UNESCO Institute for Statistics (2020). The need to collect essential education data during the COVID-19 crisis. Fact Sheet no. 58. Accessed at:

http://uis.unesco.org/sites/default/files/documents/fs58-need-for-essential-education-data 0.pdf

Wong, J. (2021, April). Teachers warn that some students have 'checked out' of school, and it will be hard to get them back. CBC News. Accessed at:

https://www.cbc.ca/news/canada/education-pandemic-missing-students-1.5971911

World Bank (2020). The COVID-19 pandemic: shocks to education and policy responses. Accessed at:

https://openknowledge.worldbank.org/bitstream/handle/10986/33696/148198.pdf

Zancajo, A., (2020). The impact of the COVID-19 pandemic on education: rapid review of the literature. COVID and Society – British Academy. School of Education, University of Glasgow.