



The following resource guide is designed to help district leaders educate stakeholders about how COVID-19 may create new learning gaps for students. Hanover includes a discussion guide for district leaders to use in working groups, taskforce conversations, or cabinet meetings.

Due to the COVID-19 pandemic, K-12 education continues to experience an unprecedented wave of school closures in terms of the number of students and school days affected.¹ Even if some states reopen schools prior to the end of the 2019-2020 school year, districts face the difficult task of planning curriculum and instruction for 2020-21 while still uncertain as to the amount of learning loss students have suffered. The extraordinary nature of COVID-19 means that no direct analogue exists to which districts may look for guidance. However, districts may benefit from studying other contexts in which students face considerable out-of-school time, such as summer vacations.

Students typically learn at a faster rate during the school year than during the summer. Yet, whether students lose learning during the summer—and which grade levels and subject areas seem most affected—remains unclear, as recent empirical studies draw differing conclusions. Even less of a consensus exists regarding the effects of summer learning loss across subgroups, as studies find trends in summer learning gaps with respect to race and socioeconomic status sensitive to the measures used.

Discussion Questions for Understanding Learning Loss in Your District

- ❓ How is COVID-19-related school closures impacting our students' learning, in general? How might such effects differ by subject area? By grade level? Among special populations (e.g., English learners, special education students, low SES students)?
- ❓ How are we tracking our students' continued learning experience during this timeframe?
- ❓ What type of quantitative data can we use to understand gaps in students' learning? What type of qualitative data can we use?
- ❓ What factors will influence students' distance learning during the remainder of the 2020-2021 school year?
- ❓ As the district begins instructional planning for 2020-2021, how can we estimate the amount of student learning that occurred in 2019-2020 in the absence of state assessment data?
- ❓ Which strategies are we currently implementing to mitigate potential learning losses among all students? Among special populations? Which challenges might your district face when implementing such strategies in the context of distance learning?
- ❓ How are we going to assess all students at the start of the 2020-2021 school year to measure the actual learning loss students experienced as a result of COVID-19-related school closures and/or summer vacation?
- ❓ How are we going to define learning loss with teachers? With parents?

Summer Learning Loss

Students typically learn at a faster rate during the school year than during the summer.² Yet, whether students actually *lose* learning during the summer—and which grade levels and subject areas seem most affected—remains unclear, as recent empirical studies draw differing conclusions. One recent study, for example, found evidence of summer learning loss in reading and mathematics across Grades 3-8,³ with achievement generally declining less in reading than mathematics. However, another recent study determined that summer learning loss did not impact students in Grades 4 and 5 despite affecting students in Grades 2 and 3.⁴



Perhaps even less of a consensus exists regarding the effects of summer learning loss across student subgroups. Consider socioeconomic status (SES). One recent study concluded that economically-disadvantaged students experience greater summer learning losses in reading and mathematics than their economically-advantaged peers across Grades 3-8.⁵ Although another recent study obtained similar results for literacy skills during the summer between Kindergarten and Grade 1, the findings did not extend to mathematics.⁶ Other recent studies uncovered even less—or, in some cases, no—evidence of a relationship between SES and summer learning loss.⁷

Importantly, authors find trends in summer learning gaps with respect to SES and race sensitive to the measures used, with estimates of summer’s impact varying based on whether a model measures inequality in absolute or relative terms.⁸ Such factors may help explain seemingly disparate results, such as some authors not detecting any significant differences in learning rates or changes in achievement gaps between black and white students during the summer and other authors even finding some evidence of faster growth in summer reading achievement among black students than their white peers.⁹

Notably, recent research on summer learning loss focuses mostly on elementary school students, especially students in Kindergarten through Grade 2. Thus, the literature offers little insight into what happens to middle and high school students’ academic achievement during the summer. Recent research on summer learning loss also concentrates mostly on effects in reading and mathematics, a likely consequence of the grade levels studied. Yet, this emphasis means that, as with secondary school students, summer’s impact on other subject areas remains relatively unexplored.

Such caveats notwithstanding, the Collaborative for Student Growth at NWEA has used literature on summer learning loss as well as analyses of average student growth trajectories to estimate the potential effects of COVID-19-related school closures on academic achievement. The results suggest that **students in Grades 3-8 may begin the 2020-2021 school year having lost roughly 30 percent “of the learning gains in reading relative to a typical school year” and approximately 50 to, in some grade levels, 100 percent of the learning gains in mathematics.**¹⁰ Thus, districts likely will see greater shares of students at risk of falling behind.

Discussion Questions for Summer Planning

- ❓ What type of programming will offer over the summer to mitigate additional learning loss or learning gaps?
- ❓ What, if any, face-to-face summer school offerings are feasible? What type of staff to student ratio is feasible?
- ❓ How can we collaborate with surrounding school districts as we plan our summer programming?
- ❓ What kind of summer programming is feasible for our families?
- ❓ How are we going to offer professional development to our staff to ensure they are prepared to support students who need adapted curriculum and instruction?

Overview of Trauma-Related Learning Loss

For districts seeking to understanding COVID-19’s potential effects, viewing the pandemic through the lens of childhood trauma also seems essential. As a public health crisis, COVID-19 itself represents a distressing incident.¹¹ Further, how students react to COVID-19 will depend on whether they have experienced other forms of trauma.¹² While research notes the most common effects of childhood trauma, however, the same incident may impact two students differently.¹³ The age at which students face trauma matters, as does their temperament, prior history of trauma, and preexisting intellectual or developmental disabilities. Students’ responses to trauma also reflect

familial factors, such as financial (in)security, housing (in)security, (un)healthy relationships, and exposure to domestic violence and other forms of abuse. Access to—or lack of—community supports and services plays a role as well.¹⁴

Academic Effects

Language Skills	Organizational Skills	Causal Reasoning Skills
If hypervigilant, students may become unable to pay attention to and process new information. Further, students may develop a distorted sense of the purpose of communication, perceiving language as means of accomplishing tasks instead of a mechanism for sharing thoughts and feelings. Students also may lack exposure to more complex use of language.	If subjected to an uncertain, unpredictable environment, students may find organizing material difficult, especially when attempting to order content sequentially.	Students' limited exploration of the world (due to their own fear and/or others' restrictions) may hinder their understanding of cause-effect relationships and their ability to empathize with others.
Attention Skills	Emotional Skills	Executive Skills
Students' anxiety and preoccupation with safety may cause them to focus on others' attitudes and behavior, thus compromising their ability to concentrate on learning. Memory skills also appear compromised.	Students may lack the capacity to understand and express the range of emotions they feel, leading them to dissociate or overreact. Both forms of response disrupt their learning.	Students may develop low self-esteem and patterns of negative thinking that impede efforts to set goals, develop plans, and implement action steps.

Sources: Multiple¹⁵

Trauma affects students' capacity to regulate their emotions and control their behavior.¹⁶ If hypervigilant, students may perceive any event that reminds them of a traumatic incident as threatening, become verbally or physically aggressive, and respond in a disproportionate way.¹⁷ At other times, students may seem passive and even "frozen,"¹⁸ withdrawing and mentally dissociating from the classroom as a coping mechanism. Trauma may make students more reluctant to engage with others as well. Students who feel unsafe at school, for example, may become distrustful of and even confrontational toward teachers and act defiantly.¹⁹ Students also may struggle to cultivate friendships with peers.²⁰ Thus, in terms of outcomes at school, trauma correlates with a higher likelihood of absenteeism, behavioral problems, suspensions, and expulsions.²¹





It also contributes to poor academic outcomes as well. In addition to achieving at lower levels, affected students become more likely to encounter learning difficulties, need added supports and interventions (including special education placements), experience grade retention, and drop out.²² Yet, how trauma influences academic outcomes remains undetermined. Trauma may impact learning by harming brain development (with the specific regions and skills affected dependent on the age(s) at which a distressing event or situation occurs)²³ and/or by inhibiting students' capacity to regulate their emotions and behavior (as outlined above).²⁴

Discussion Questions for Understanding Traumatic Impact

- ❓ How can we identify signs of trauma among students and families while schools remain closed?
- ❓ How can your district continue to monitor and respond to the social-emotional effects of COVID-19 during the 2020-2021 school year?
- ❓ Which forms of training and resources do your staff need to support students and families while schools remain closed? During the 2020-2021 school year?
- ❓ How can we use a trauma-informed approach to mitigate the social-emotional effects of COVID-19? How do we need to adapt such practices to accommodate distance learning and social distancing?
- ❓ How is uncertainty around next school year impacting our staff? Students? Families?

Additional Resources

Districts may review the following materials to gain additional insight into summer learning loss, as well as the social-emotional and academic effects of childhood trauma.

TITLE	PUBLISHING ORGANIZATION/JOURNAL	QR CODE
<u>Effective and Promising Summer Learning Programs and Approaches for Economically Disadvantaged Children and Youth</u>	Child Trends	
<u>The COVID-19 Slide: What Summer Learning Loss Can Tell Us about the Potential Impact of School Closures on Student Academic Achievement</u>	Collaborative for Student Growth at NWEA	
<u>Building Quality in Summer Learning Programs: Approaches and Recommendations</u>	National Summer Learning Association	
<u>Summer Starts in September: A Comprehensive Planning Guide for Summer Learning Programs</u>	National Summer Learning Association	

TITLE	PUBLISHING ORGANIZATION/JOURNAL	QR CODE
<u><i>Making Summer Count: How Summer Programs Can Boost Children's Learning</i></u>	RAND Corporation	
<u><i>Getting to Work on Summer Learning: Recommended Practices for Success</i></u>	RAND Corporation	
<u><i>Helping Traumatized Children Learn, Volumes 1 and 2</i></u>	Massachusetts Advocates for Children, Harvard Law School, and Task Force on Children Affected by Domestic Violence	
<u><i>Creating, Supporting, and Sustaining Trauma-Informed Schools: A System Framework</i></u>	The National Child Traumatic Stress Network	
<u><i>Trauma-Informed SEL Toolkit</i></u>	Transforming Education	
<u><i>Resources for Supporting Children's Emotional Well-being During the COVID-19 Pandemic</i></u>	Child Trends	
<u><i>Helping Children Cope with Changes Resulting From COVID-19</i></u>	National Association of School Psychologists	
<u><i>A Trauma-Informed Approach to Teaching Through Coronavirus</i></u>	Teaching Tolerance	

Endnotes

- ¹ "Map: Coronavirus and School Closures." *Education Week*. <https://www.edweek.org/ew/section/multimedia/map-coronavirus-and-school-closures.html>
- ² [1] Benson, J. and G. Borman. "Family, Neighborhood, and School Settings Across Seasons: When Do Socioeconomic Context and Racial Composition Matter for the Reading Achievement Growth of Young Children?" *Teachers College Record*, 112:5, 2010. https://www.researchgate.net/publication/285719563_Family_Neighborhood_and_School_Settings_Across_Seasons_When_Do_Socioeconomic_Context_and_Racial_Composition_Matter_for_the_Reading_Achievement_Growth_of_Young_Children [2] Quinn, D., N. Cooc, J. McIntyre, and C. Gomez. "Seasonal Dynamics of Academic Achievement Inequality by Socioeconomic Status and Race/Ethnicity: Updating and Extending Past Research With New National Data." *Educational Researcher*, 45:8, 2016. Retrieved from SAGE Journals. [3] Ready, D. "Socioeconomic Disadvantage, School Attendance, and Early Cognitive Development: The Differential Effects of School Exposure." *Sociology of Education*, 83:4, 2010. Retrieved from EBSCOhost.
- ³ Silvernail, D. and B. Mazjanis "Summer Learning Loss for Maine Public School Elementary Students." Maine Education Policy Research Institute, University of Southern Maine, 2015. <https://pdfs.semanticscholar.org/2ae9/a1ae6b89882ae8ea932fa57aeea71ff219ca.pdf>
- ⁴ Sandberg Patton, K. and A. Reschly. "Using Curriculum-Based Measurement to Examine Summer Learning Loss." *Psychology in the Schools*, 50:7, 2013. Retrieved from EBSCOhost.
- ⁵ Silvernail and Mazjanis, Op. cit.
- ⁶ [1] Benson and Borman, Op. cit. [2] Ready, Op. cit.
- ⁷ [1] Sandberg Patton and Reschly, Op. cit. [2] von Hippel, P. and C. Hamrock. "Do Test Score Gaps Grow Before, During, or Between the School Years? Measurement Artifacts and What We Can Know in Spite of Them." *Sociological Science*, 6, 2019. https://www.sociologicalscience.com/download/vol-6/january/SocSci_v6_43to80.pdf
- ⁸ [1] von Hippel and Hamrock, Op. cit. [2] Quinn, Cooc, McIntyre, and Gomez, Op. cit.
- ⁹ [1] Quinn, D. "Black-White Summer Learning Gaps: Interpreting the Variability of Estimates Across Representations." *Educational Evaluation and Policy Analysis*, 37:1, 2015. Retrieved from SAGE Journals. [2] Benson and Borman, Op. cit.
- ¹⁰ Kuhfeld, M. and B. Tarasawa. "The COVID-19 Slide: What Summer Learning Loss Can Tell Us about the Potential Impact of School Closures on Student Academic Achievement." Collaborative for Student Growth at NWEA, April 2020. https://www.nwea.org/content/uploads/2020/04/Collaborative-Brief_Covid19-Slide-APR20.pdf
- ¹¹ "Disasters." The National Child Traumatic Stress Network. <https://www.nctsn.org/what-is-child-trauma/trauma-types/disasters>
- ¹² "About Child Trauma." The National Child Traumatic Stress Network. <https://www.nctsn.org/what-is-child-trauma/about-child-trauma>
- ¹³ [1] "About Child Trauma," Op. cit. [2] "SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach." Substance Abuse and Mental Health Services Administration, July 2014. <https://store.samhsa.gov/product/SAMHSA-s-Concept-of-Trauma-and-Guidance-for-a-Trauma-Informed-Approach/SMA14-4884> [3] "The 12 Core Concepts: Concepts for Understanding Traumatic Stress Responses in Children and Families." The National Child Traumatic Stress Network, 2012. https://www.nctsn.org/sites/default/files/resources//the_12_core_concepts_for_understanding_traumatic_stress_responses_in_children_and_families.pdf [4] "Child Trauma Toolkit for Educators." The National Child Traumatic Stress Network, 2008. https://www.nctsn.org/sites/default/files/resources//child_trauma_toolkit_educators.pdf
- ¹⁴ Ibid.
- ¹⁵ [1] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [2] Krasnoff, Op. cit. [3] Rodenbush, Op. cit. [4] Miller, Op. cit. [5] McInerney and McKlindon, Op. cit. [6] "Child Trauma Toolkit for Educators," Op. cit. [7] Downey, Op. cit. [8] Tobin, Op. cit.
- ¹⁶ [1] Cole, S.F. et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1." Massachusetts Advocates for Children, Harvard Law School, and Task Force on Children Affected by Domestic Violence. 2005. <https://traumasensitiveschools.org/tlpi-publications/download-a-free-copy-of-helping-traumatized-children-learn/> [2] Miller, C. "How Trauma Affects Kids in School." Child Mind Institute. <https://childmind.org/article/how-trauma-affects-kids-school/> [3] Brunzell, T., L. Waters, and H. Stokes. "Teaching With Strengths in Trauma-Affected Students: A New Approach to Healing and Growth in the Classroom." *American Journal of Orthopsychiatry*, 85:1, 2015. <https://pdfs.semanticscholar.org/a641/39bc07d810055ddd9ee796aad112df260386.pdf> [4] "The 12 Core Concepts: Concepts for Understanding Traumatic Stress Responses in Children and Families," Op. cit. [5] "Child Trauma Toolkit for Educators," Op. cit. [6] Rodenbush, K. "The Effects of Trauma on Behavior in the Classroom." Monterey County Office of Education, 2015. <https://docplayer.net/25954072-The-effects-of-trauma-on-behavior-in-the-classroom-presented-by-kacey-rodenbush-lmft-behavioral-health-unit-supervisor.html> [7] Krasnoff, B. "A Practitioner's Guide to Educating Traumatized Children." Education Northwest. <https://educationnorthwest.org/sites/default/files/resources/educating-traumatized-children.pdf> [8] Downey, L. "Calmer Classrooms: A Guide to Working with Traumatized Children." Child Safety Commissioner, State of Victoria, June 2007. http://makingsenseoftrauma.com/wp-content/uploads/2016/02/calmer_classrooms.pdf [9] Tobin, M.



"Childhood Trauma: Developmental Pathways and Implications for the Classroom." *Changing Minds: Discussions in Neuroscience, Psychology and Education*, 3, July 2016.

https://research.acer.edu.au/cgi/viewcontent.cgi?article=1019&context=learning_processes

¹⁷ [1] Miller, Op. cit. [2] "Child Trauma Toolkit for Educators," Op. cit. [3] Rodenbush, Op. cit. [4] McNerney, M. and A. McKlindon. "Unlocking the Door to Learning: Trauma-Informed Classrooms and Transformational Schools." Education Law Center, December 2014. <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf> [5] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [6] Downey, Op. cit.

¹⁸ [1] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [2] Downey, Op. cit.

¹⁹ [1] Miller, Op. cit. [2] McNerney and McKlindon, Op. cit. [3] Rodenbush, Op. cit. [4] Krasnoff, Op. cit. [5] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit.

²⁰ [1] Rodenbush, Op. cit. [2] Krasnoff, Op. cit. [3] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [4] Downey, Op. cit.

²¹ [1] Rodenbush, Op. cit. [2] Krasnoff, Op. cit. [3] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [4] Burke, N.J., J.L. Hellman, B.G. Scott, C.F. Weems, and V.G. Carrion. "The Impact of Adverse Childhood Experiences on an Urban Pediatric Population." *Child Abuse & Neglect*, 35:6, June 2011.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3119733/pdf/nihms292567.pdf>

²² [1] "Child Trauma Toolkit for Educators," Op. cit. [2] Rodenbush, Op. cit. [3] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [4] Krasnoff, Op. cit. [5] Tobin, Op. cit. [6] McNerney and McKlindon, Op. cit. [7] Brunzell, Waters, and Stokes, Op. cit. [8] Burke, Hellman, Scott, Weems, and Carrion, Op. cit. [9] Goodman, R., M. Miller, and C. West-Olatunji. "Traumatic Stress, Socioeconomic Status, and Academic Achievement Among Primary School Students." *Psychological Trauma: Theory, Research, Practice, and Policy*, 4:3, 2012.

https://www.researchgate.net/publication/232560514_Traumatic_Stress_Socioeconomic_Status_and_Academic_Achievement_Among_Primary_School_Students

²³ [1] McNerney and McKlindon, Op. cit. [2] "The 12 Core Concepts: Concepts for Understanding Traumatic Stress Responses in Children and Families," Op. cit. [3] Krasnoff, Op. cit. [4] Downey, Op. cit. [5] Tobin, Op. cit.

²⁴ [1] McNerney and McKlindon, Op. cit. [2] "Child Trauma Toolkit for Educators," Op. cit. [3] Krasnoff, Op. cit. [4] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [5] Downey, Op. cit.