

A Practitioners Guide to Responding to COVID-19 Series: *Predicting the Impact of COVID-19 on Out-of-School Learning Loss*

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Report Navigation

This Information Request (IR) report contains a navigation scheme that is visible in the sidebar on the left side of the document (to display, from the tool bar, select for PC: View > Show > Navigation Pane or for Mac: View > Sidebar > Navigation). From within the navigation, click the desired section heading or subheading to move to that particular area of the report. The IR is organized into the following sections:

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Background

Three state education agencies (SEA) that are served by Region 7 Comprehensive Center (R7CC) have been working diligently to provide guidance and support to their respective school districts as the impacts of COVID-19 become apparent to each school system. In response to questions and concerns about COVID-19 from state leadership within Region 7, a series of annotated bibliographies was created to inform stakeholders about the potential impact of increased out-of-school time and possible strategies to mitigate harm to students' academic development. The purpose of the series of bibliographies is to address three main questions.

Question 1: What will the impact of COVID-19 be on out-of-school learning loss?

Question 2: What impact do extended learning programs (summer school, after school programs, extended school day, or year-round school) have on student academic achievement?

Question 3: What initiatives have demonstrated success in offsetting out-of-school learning loss?

This bibliography will address the first of the three questions. Once shared with each SEA, they will then be distributed to LEAs for consideration as they refine their district and school continuity plans for the 2020-2021 school year.

There are 44 annotations included in this series of bibliographies. The organization within each section (articles or subsections) of the report is by ESSA level of evidence. However, within each level of evidence, organization is not intended to convey meaning. ESSA levels of evidence and What Works Clearinghouse designations are provided as a quick reference to readers.

Procedure

To locate resources for this report, the R7CC Information Request team conducted online searches across three primary databases (ERIC, IES, and Google Scholar). In order to create the body of literature for review, researchers began with three search terms (“summer slide,” “summer melt,” and “summer learning loss”). The term “summer melt” was deleted from the search because it was associated with the summer between high school and college. The searches produced over 1,000 possible publications to create the final pool of 132 unique publications. Upon review of 132 resources located in the above searches, the team selected 44 for inclusion in this series of reports, based on these criteria: (a) publication date within the past 10 years, unless they were perceived as seminal works (e.g., Cooper et al., 2000) by the research team; (b) initiatives, programs, and studies that produced statistically significant, positive effects were included; and/or (c) content relevant to the client’s topics of interest. Detailed information on the selected resources is provided in the Resource Summaries section of this report, which follows the Overview.

In order to provide a reference for the quality of evidence presented in this bibliography, the researchers assigned each relevant publication to one of the four levels of evidence provided in the Every Student Succeeds Act guidance. Every relevant article was coded by two of the four authors. When the author disagreed on a suggested level of evidence, they discussed the differences and decided on a final recommendation. The authors followed guidance of Lee,

Hughes, Smith, and Foorman (2016; see reference below) to determine the appropriate level of evidence.

General Limitations

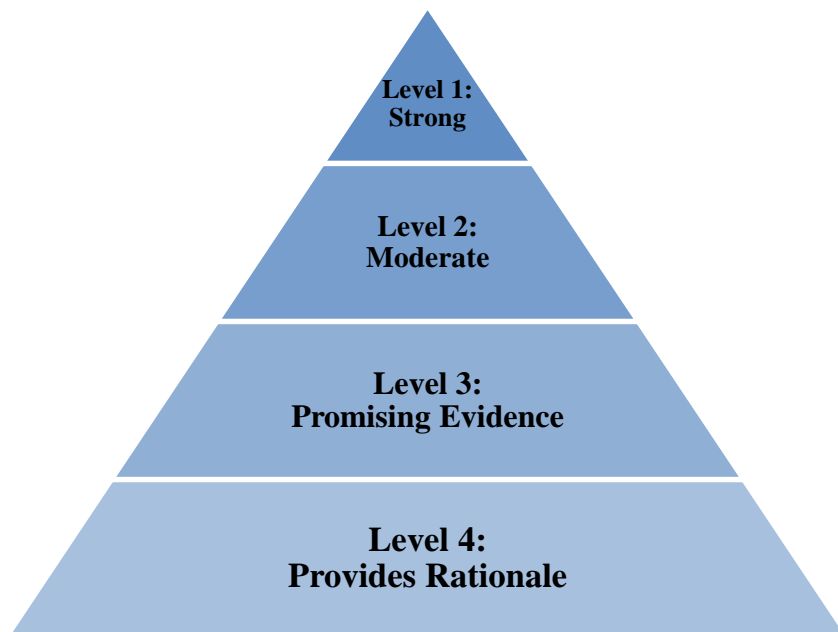
As with many topics in education, there is a limited research base of information on out-of-school learning loss and particularly how COVID-19 will impact student learning. However, resources cited in this summary include a few research-based strategies and practices grounded by strong, moderate, and promising evidence as defined by the criteria established in the ESSA guidance.

The ESSA Levels of Evidence indicators are meant as guidance to state and local administrators. Two of the four authors are certified reviewers of What Works Clearinghouse standards in group design. Even with this level of expertise and guidance, the authors cannot ensure outside entities will agree with these designations.

Overview

This first report centers around a review of resources that discuss out-of-school learning loss. Summer learning loss occurs for most students. As a result of increased out-of-school time due to COVID-19, schools should expect students to return in the fall with a much wider range of knowledge. Also, the average knowledge of incoming students is likely to be lower than prior years due to more out-of-school time because of COVID-19.

ESSA Levels of Evidence



In the Resource Summaries section, each resource summary includes the title, ESSA level of evidence (1=strong evidence, 2=moderate evidence, 3=promising evidence, 4=demonstrates a rationale), and an overview.

Resource Summaries

The eight selected resources relevant to this research question are listed by ESSA level of evidence and then in alphabetical order by author within each level.

Predicting the impact of COVID-19 on out-of-school learning loss

1. Cooper, H., Nye, B., Charlton, K., Lindsay, J., & Greathouse, S. (1996). The effects of summer vacation on achievement test scores: A narrative and meta-analytic review. *Review of Educational Research*, 66, 227-268. doi: [10.3102/00346543066003227](https://doi.org/10.3102/00346543066003227)

Level of Evidence: ESSA Level 1

Overview

Cooper et al. (1996) produced a meta-analysis of the research on summer learning loss that revealed significant losses in reading and mathematics equal to about one month of school (0.1 SD of spring test scores). Summer learning loss was more pronounced in math than in reading. Socioeconomic status (SES) was a significant indicator of differential summer learning loss with low SES students falling further behind over the summer months.

2. Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of summer learning gap. *American Sociological Review*, 72, 167-180.

Level of Evidence: ESSA Level 2

Overview

Alexander, Entwisle, and Olson (2007) completed a longitudinal study of Baltimore students from early education through adulthood to determine the long-term effects of the summer learning gap. Researchers found that high SES students achieved 0.88 SDs higher in reading at the end of ninth grade. One-third of the difference existed prior to first grade, and the other two-thirds of the difference was attributed to summer learning loss. The authors recommend practitioners address achievement gaps early (prior to Grade 1) and target programming for disadvantaged youth during the school year and summer.

- Alexander, K. L., Entwisle, D. R., & Olson, L, S. (2007). Summer learning and its implications: Insights from the Beginning School Study. *New Directions for Youth Development, 114*, 11-32. [doi: 10.1002/yd.210](https://doi.org/10.1002/yd.210)

Level of Evidence: ESSA Level 2

Overview

Alexander, Entwisle, and Olson (2007) found that out-of-school factors account for almost all of the achievement gap that separates low and high SES children at the start of high school, with summer break accounting for most of the difference. For these students, the authors advocate extended learning opportunities for low-income youth and a focus on the influence of the family’s role starting in the early elementary grades. The authors found that low SES students either maintained or lost some of their reading ability over the summers while high SES students improved their reading ability. Similar patterns were found in mathematics, though the ability gap grew larger over the summers for math than reading. Despite the larger gap in math, the authors recommend interventions start with reading because reading ability is crucial across all content areas. Additionally, the authors point to educational policies that increase access to books as having a potentially important impact on low SES children.

- Gershenson, S., & Hayes, M. S. (2017). The summer learning of exceptional students. *American Journal of Education, 123*, 447-473. [doi: 10.1086/691226](https://doi.org/10.1086/691226)

Level of Evidence: ESSA Level 3

Overview

Gershenson and Hayes (2017) examined summer learning loss for Kindergarten or Grade 1 exceptional students with an IEP or students who speak a language other than English at home. Using the ECLS-K dataset, the authors found that exceptional students were less likely to participate in organized summer activities or summer daycare. These students were more likely to attend summer school or practice math with a parent than their peers. Exceptional students experience significantly higher summer learning rates than their peers (0.15 SD), though the difference is largely a result of gains by students with an IEP. Like other studies, Gershenson and Hayes found students from low SES households had significantly lower summer learning rates than their more advantaged peers. However, within the population of students from low SES households, the lower summer learning rates are largely a function of exceptional students within that population.

5. Kuhfeld, M., & Tarasawa, B. (2020). The COVID-19 slide: *What summer learning loss can tell us about the potential impact of school closures on student academic achievement*. Portland, OR: NWEA. Retrieved from https://www.nwea.org/content/uploads/2020/04/Collaborative-Brief_Covid19-Slide-APR20.pdf

Level of Evidence: ESSA Level 3

Overview

Based on NWEA’s Measures of Academic Progress (MAP), Kuhfeld and Tarasawa (2020) predict the learning impacts of COVID-19 on mathematics and reading achievement of students in Grades 3 to 8. The researchers predict that students will return to school in fall with only 70% of normal reading gains. In mathematics, students are predicted to return to school with only 50% of normal gains, and students at some grade levels will be more than a year behind.

6. Kuhfeld, M. (2019). Surprising new evidence on summer learning loss. *Phi Delta Kappan*, 101(1), 25-29. doi: [10.1177/0031721719871560](https://doi.org/10.1177/0031721719871560)

Level of Evidence: ESSA Level 3

Overview

Kuhfeld (2019) demonstrated that summer learning loss occurs for most students from Grades 3 to 8 (62% to 78%) on MAP reading and mathematics assessments, but the loss was not related to socioeconomic status or geographic location. The reported learning losses ranged from one to two months of school year learning in reading and one to three months in mathematics. Students with the largest gains during the year had the largest losses over the summer.

7. Von Hippel, P. T. (2019). Is summer learning loss real? How I lost faith in one of education research’s classic results. *Education Next*, 19(14), 8-15. Retrieved from <https://www.educationnext.org/is-summer-learning-loss-real-how-i-lost-faith-education-research-results/>

Level of Evidence: ESSA Level 4

Overview

Von Hippel (2019) argues that the impact of summer learning documented in the literature on achievement gaps may be a function of inadequate tests and scoring methods. He compares results from NWEA’s MAP and ECLS-K, both computer-adaptive tests, and the results do not agree. His research supports that of early childhood experts demonstrating that the achievement gap present at Grade 8 is not due to summer learning loss but is a reflection of the gap already present in Kindergarten. Von Hippel argues that while gaps may not change during summer because all learning slows during summer months, summer presents an opportunity to close gaps via summer learning programs and an extended-school year solution focused on catching up students who are behind.

8. Von Hippel, P. T. (2020, April 9). How will the coronavirus crisis affect children’s learning? Unequally [Web log post]. *Education Next*. Retrieved from <https://www.educationnext.org/how-will-coronavirus-crisis-affect-childrens-learning-unequally-covid-19/>

Level of Evidence: ESSA Level 4

Overview

Von Hippel (2020) discusses comparisons between summer learning loss and the COVID-19 interruption. Two issues at the forefront are technology and parents, both of which are likely to produce uneven impacts on student learning due to a lack of rigorous evaluation of educational technology products and inequitable circumstances facing families. Though he dismisses similarities to summer learning, he posits that most students will return to school behind academically in the fall with much larger gaps than before between students with and without educated parents. He proposes schools and districts invest in diagnostic testing when school is back in session to determine which students need retention (likely many more than usual) and which need remediation.

Conclusion

The COVID-19 pandemic has had unpredictable and significant ripple effect on our schools. As a result, some states and districts made the difficult decision to end their school years much earlier than expected. These students did not finish their current grade level’s curriculum and will spend a longer time out-of-school. Other states and districts made a quick transition to online schooling. Though a reasonable response to this unforeseen crisis, the transition in most

circumstances has been less than ideal. In both circumstances, students are spending a much larger amount of time out-of-school compared with prior years. Learning loss due to out-of-school time is a real concern for state, district, and local leaders. In making plans for the 2020-2021 school year, districts and schools must realize and plan for a student body with a much wider range of academic abilities due to out-of-school learning loss.

Overview of Findings:

- Summer learning loss occurs for most students.
- As a result of increased out-of-school time due to COVID-19, schools should expect students to return in the fall with a much wider range of knowledge.
- Also, the average knowledge of incoming students is likely to be lower than prior years due to more out-of-school time because of COVID-19.

In response to a request from three SEA clients within Region 7, the R7CC Information Request team reviewed 8 resources that discuss findings related to extended out-of-school learning loss. The ESSA level of evidence for the studies discussed in this Information Request varied with the majority (three) aligning with the criteria for promising evidence of impact, one having strong evidence (ESSA Level 1), two having moderate evidence (ESSA Level 2), and two having demonstrates a rationale (ESSA Level 4).

References

Lee, L., Hughes, J., Smith, K., & Foorman, B. (2016). *An LEA or school guide for identifying evidence-based interventions for school improvement*. Tallahassee, FL: Florida State University, Florida Center for Reading Research. Retrieved from https://fcrr.org/documents/essa/essa_guide_lea_introduction.pdf

Information Requests are custom reports that are prepared to fulfill requests for information by the departments of education of the states served by R7CC (Alabama, Florida, and Mississippi). The requests address topics on current education issues related to the implementation of the Every Student Succeeds Act (ESSA). For more information, visit the R7CC website at region7comprehensivecenter.org.

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