Tulsa SEED Study

STUDY OF SCHOOL EXPERIENCES AND EARLY DEVELOPMENT
GEORGETOWN UNIVERSITY & UNIVERSITY OF OKLAHOMA-TULSA

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What We Lose When We Focus on Learning Loss

Parents, educators, researchers, and journalists have alighted on "learning loss" as a devastating outcome of COVID-related school closures.[1, 2] Typically, these discussions blame learning loss on the extended and unpredictable disruptions in academic learning that occurred when schools transitioned to remote instruction, particularly in low-resource communities.

But the real story is more complicated. In fact, most children did not "lose" knowledge they had acquired before COVID. Instead, they continued to gain knowledge but at a dramatically slower pace than they did before the pandemic.[3] As a result, their academic performance is well below the level of learning expected for their age. In other words, it appears that "learning stagnation" and not "learning loss" may be at play. This scenario provides an opportunity to evaluate how schooling empowers children's learning.

We illustrate this point – that learning stagnation is not the same as learning loss – with data from the Tulsa SEED Study, an ongoing evaluation of preK education in Tulsa, OK.[4] The study began in 2016, with a cohort of 3-year-old children who have been followed ever since. In the spring of 2020, when schools transitioned to remote instruction due to COVID, the students were in 1st grade. In the spring of 2021, when schools reopened for in person learning, the students were in 2nd grade.

We were able to resume testing of children's academic knowledge in the fall of 3rd grade using a common measure of math and reading in the U.S. -the Woodcock-Johnson III (W-J III) Tests of Achievement.[5]

This enabled us to investigate the academic performance of 625 children who were assessed across four timepoints spanning the pandemic: Fall 2018 (K), Spring 2019 (K), Fall 2019 (1st), and Fall 2021 (3rd).

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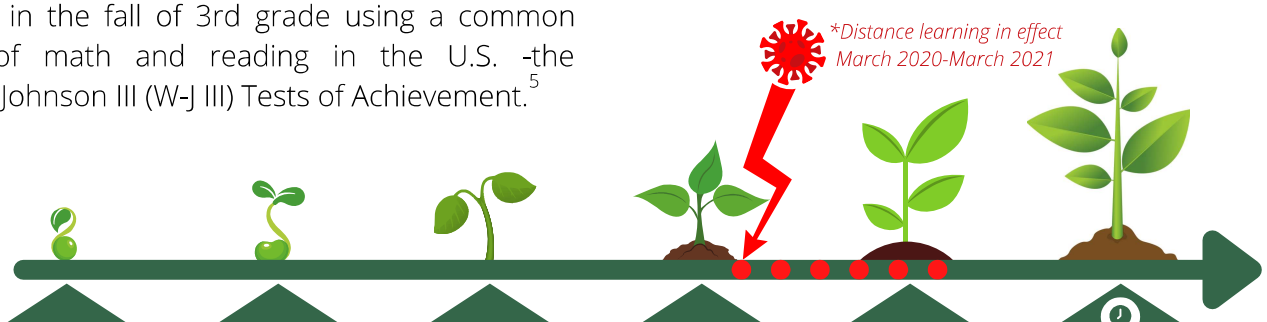
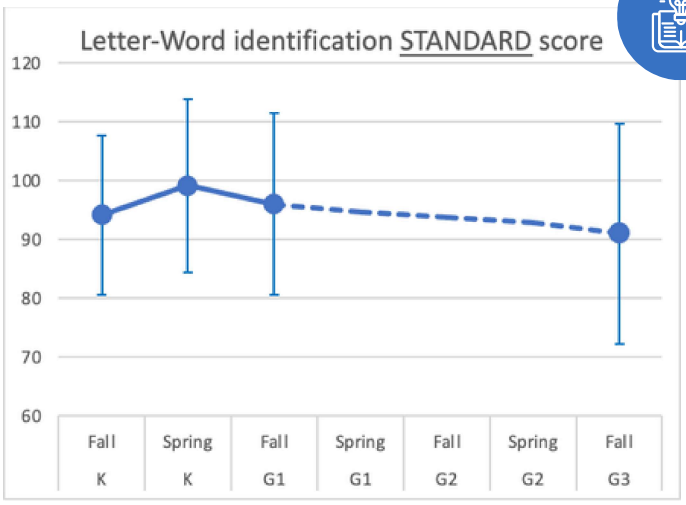
This test provides two different types of scores for each child: (1) a RAW score indicates the number of questions the child answered correctly; and (2) a STANDARD score reflects a child's performance relative to others at the same age in a large sample. For example, a child obtaining a raw score of 17 means she has a standard score of 101. Standard scores typically have an average of 100, meaning this child performed around the average of the same age peer group. The peers consist of a large group of children in the U.S. of the same age who took the same test in the early 2000s prior to COVID-19. A STANDARD score above 100 means the child scored higher than the peer group's average, and a score below 100 means the child scored lower than their peer group's average.



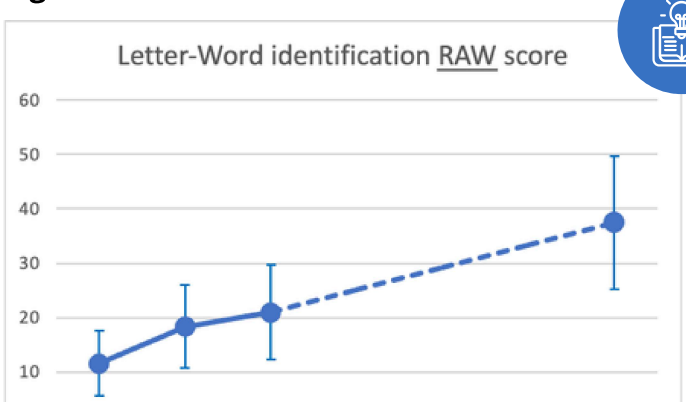
In Figure 1a, we show the STANDARD scores at each time point obtained from W-J III Letter-Word Identification subtest, which measures **children's ability to recognize letters or words.** The time periods when we could not administer the test because of remote instruction (Spring of 1st through 2nd grade) are represented by dotted lines that connect the actual observed scores. It shows a downward trend with children scoring lower, not higher, than before the school closures. That is because in this graph they are being compared to the national sample of children back from the 2000s in their 3rd grade year who never experienced COVID or remote instruction. Compared to that group of children, the children in our study are not gaining as much as we would expect by the fall of 3rd grade.

Figure 1a



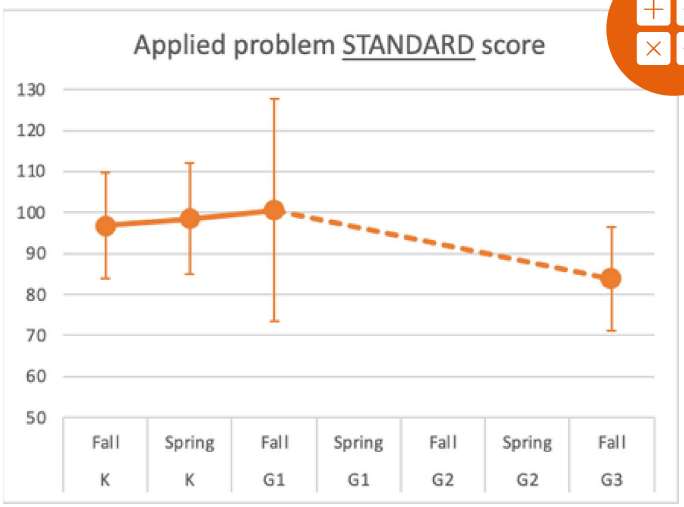
However, Figure 1b depicts the average RAW scores at each timepoint before and then again after schools re-opened using solid lines. The children scored higher each time they took the test as measured by RAW scores, indicating that their letter/word recognition was growing from kindergarten through third grade.

Figure 1b



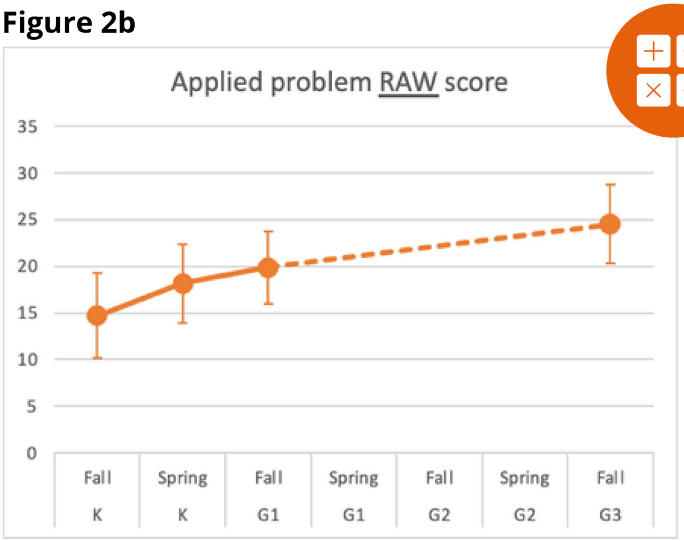
The same pattern emerges with **children's problem-solving skill involving math**, as measured by the Applied Problems subtest. When examining the STANDARD scores in Figure 2a, the downward trend is apparent.

Figure 2a



However, the RAW scores for these children continued to grow from before and after school closures due to COVID (Figure 2b). Again, that is because STANDARD scores compare them to the national averages from children tested in the fall of their 3rd grade year in the early 2000s. Yes, they are scoring lower relative to that national sample than they did before COVID. But they are still scoring higher relative to themselves before COVID (as shown by the RAW scores in Figure 2b).

Figure 2b



The real story about "learning loss" is one of continued growth in knowledge, but at a disturbingly slow pace that left young children well behind expected levels of learning for their age. These results affirm the essential role played by in-person schooling during the early elementary grades. The learning opportunities provided

These results also affirm that even under adverse conditions, children continue to learn. Despite COVID-19, they knew more at 3rd grade entry than they did in 1st and 2nd grade. Teachers do not need to repeat those years' curricula. Rather, they need the support and training to teach the 3rd grade curriculum with stronger scaffolding for children with more diverse knowledge base entering 3rd grade.

Teachers also need support and training to teach the 3rd grade curriculum to students with a broader range of abilities than ever before. We found that 3rd grade teachers faced a greater range of word reading (though not math) abilities in their incoming students in the fall than teachers had in previous grades. This can be seen in the length of the vertical lines at each timepoint surrounding each solid dot. That line got noticeably longer in 3rd grade, meaning that children are showing a wider range of scores, both lower and higher, around the average, than they used to. This wide variation presents an immense challenge to teachers as it highlights the importance of tailoring instruction to each individual child or children with similar knowledge level, with his or her unique starting point and potential for growth.

This type of individualized teaching requires specialized preparation, in-classroom assistance, and ongoing professional development, resources that are often scarce in low-resourced schools. Thus, it is important to shift our foci from learning loss of children to acknowledging teachers' changing demands.

The COVID-19 pandemic exposed the crucial role that teachers play in young children's lives along with the minimal support and recognition they receive. Teachers' dedication to their students during school closures enabled continuous growth in children's academic knowledge and skills. As we now pivot back to in-school learning, society owes them the recognition, resources and support they need to engage in the intensive classroom instruction now required.

Children depend on this so they can catch-up and resume their typically rapid pace of learning. Families depend on this so they can see their children succeed and thrive as students. Society depends on this so we have an educated and productive citizenry.

Now, more than ever, is the time to invest in teachers as active agents of recovery.

References

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(5) Woodcock, R. W., McGrew, K. S., & Mather, N. (2001; 2007). Woodcock Johnson III Tests of Achievement. Rolling Meadows, IL: Riverside Publishing.

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