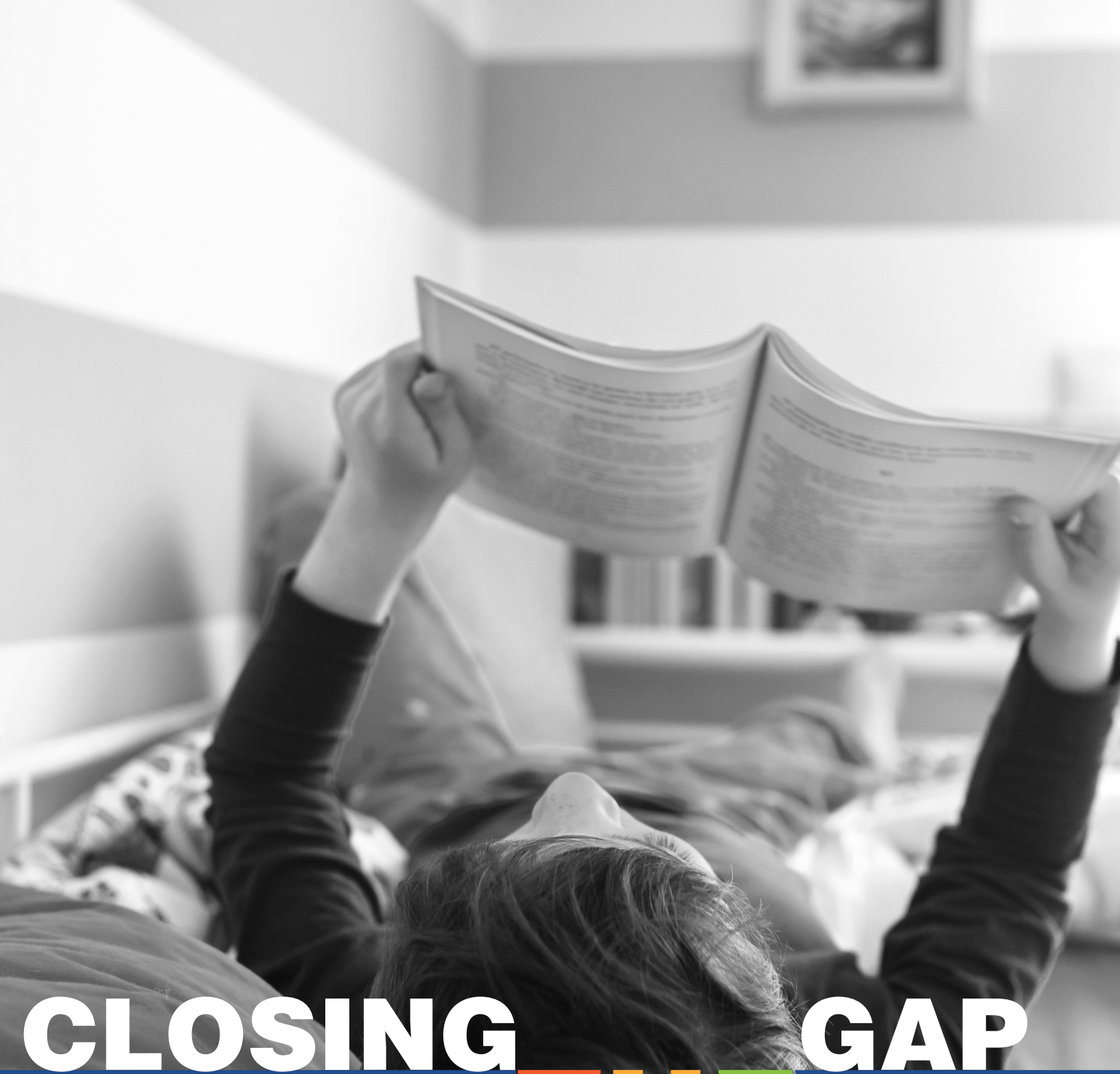

CLOSING THE GAP

An Urgent Need For All Students

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The current social environment is not anything we have experienced in our lifetimes. So, it is difficult to find research that can help guide us on reading instruction during a pandemic time of remote learning.

However, there is research on what has come to be known as the “summer slide,” and that research can help shed light on, what happens to student learning, when there is a gap in instruction and for which groups of students this may be more pronounced.

This whitepaper will review the underlying research on the best approaches to closing skills gaps through instruction and assessment from the science of reading.

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Potential COVID Slide in Reading Proficiency

In their seminal work, Cooper et al. (1996) conducted a meta-analysis of studies on "summer learning loss." Their conclusion was that "summer learning loss" represents approximately one month using a grade-level equivalence scale. As Cooper et al. (1996) report, the effect of summer slide is worse for students from low socioeconomic (SES) families compared to high SES. The cumulative effect of summer slide can lead to greater discrepancies between high and low SES students in later grades (Alexander et al., 2007). Some literacy programs are designed to mitigate the summer slide throughout the school year, while others are used during summer school to try and prevent a slide from occurring at all.

Lexia researchers (Macaruso et al., 2019) tracked the reading scores of kindergartners who used Core5 for multiple consecutive school years. This was a strong implementation, with high levels of usage of both online and offline components of Core5. There was also a dedicated school leader who championed and coordinated these activities. Students showed significant gains on a standardized reading test from the fall to spring of each school year. Test scores declined from spring of one school year to fall of the next, indicative of a summer slide. However, students' scores improved significantly from fall of one school year to fall of the next, pointing to Core5's value in mitigating summer slide.

When looking at results like these and other summer slide prevention studies, how can we generalize some of these findings to the current environment and how the sudden disruption in student learning due to COVID-19 may have impacted student learning?

Last spring when schools and districts were transitioning to remote learning, many students went weeks or months without their usual instruction or in some cases, without any instruction. It is reasonable to draw connections from the summer slide research to this period, and conclude that students had a slide or a loss in their learning during this period.

NWEA has used prior analysis on summer slide to project what a *COVID slowdown or a COVID slide* would look like. They predicted it would be most significant in the younger grades (Kuhfeld & Tarasawa, 2020). Unlike the research from the summer slide that indicates there can be a cumulative effect over multiple summers, the data for COVID slide is based on one instance and not cumulative. It is thought that students in the younger grades, who are in the process of learning to read vs. reading to learn, could

Students in the younger grades, who are in the process of learning to read vs. reading to learn, could experience a larger slide due to the COVID school closures than older learners.

experience a larger slide due to the COVID school closures than older learners. As the research shows, this slide is likely more severe for students who are from low SES families. The logical follow-up question is, **what can we do about it and how do we close those gaps and catch them up?**

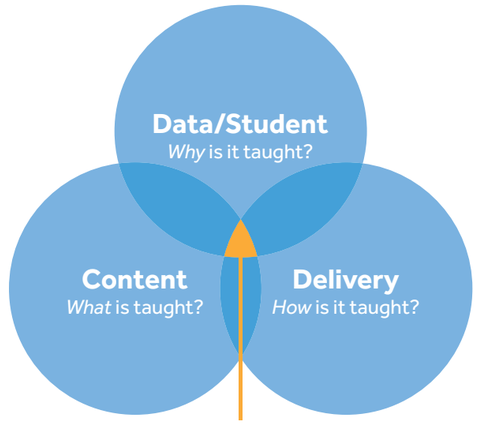
Instruction that will close gaps in learning and help students catch up requires asking the three important questions found in the image below (Kame'enui & Simmons, 1990; Soifer, 2013, 2018).

Why is it taught? Instructional content should be taught because it is based on data, from gold-standard research, or the science of reading, and student performance.

What is taught? The instructional content should comprise components most predictive of reading success, such as phonology, orthography, morphology, semantics, and syntax.

How is it taught? The delivery of instructional content should adhere to the principles of instruction that are informed by the science of reading—explicit, systematic, cumulative, and multimodal or multisensory.

The junction of the why, what, and how of instruction ensures equitable instruction that meets each student's needs.



Equitable
Instruction that meets each student's needs happen here.

(Kame'enui & Simmons, 1990; Soifer, 2013, 2018)

WHY

The WHY: Students, Assessment and Data

To close gaps and catch students up, teachers need to understand students' level of performance and their skills gaps (Foorman, Francis, & Fletcher, 1998; Foorman & Torgesen, 2001; Vaughn, Wanzek, Linan-Thompson, & Murray, 2007). There are four main purposes of assessment (Torgesen, 2006) that guide instruction and assess overall proficiency levels. Assessments lead educators to the most targeted and time-efficient pathways to close the gaps for students. Below are the four main purposes of assessment and the questions educators need to answer.

1. **Identify:** Which of my students are at-risk for difficulty? And what is the severity of the risk? (Current status/level)
2. **Monitor:** How much progress are my students making? What progress is happening when the students are not with me? (Whether at home or while you are with a reading group in class)
3. **Collect:** What is the profile of skills for my student? Where do I need to focus intervention - (Where are the gaps?)
4. **Assess:** Have my students learned the material that has been taught?

The answers to the first (identify) and third (collect) questions will help educators determine not only the intensity of instruction that is needed to catch students up (depending on how far behind grade level they are), but also where to focus that instruction/intervention. During these times of remote learning or hybrid learning, one challenge educators are facing is that many of their traditional assessment methods are not available to them or have been cancelled. Districts need to focus on finding assessment tools that can be administered remotely and are reliable at scale. In addition, the results should be available quickly to inform instruction—whether remote or in person.

WHAT

The WHAT: Rigorous Content Based on the Science of Reading

To ensure students continue to build a foundation of reading skills, educators must identify programs that include recommendations from decades of research on the science of learning to read. (Lonigan & Shanahan, 2008; NICHD, 2000; Snow, Burns, & Griffin, 1998). When teachers want to identify the gaps in learning through assessment and then address the gaps through instruction, there are five key areas they should investigate.

Phonology is the sound system of language. English consists of approximately 44 speech sounds, or phonemes. Phonological and phonemic awareness are necessary components in learning to read (NICHD, 2000) to the extent that early instruction can prevent reading failure (Stanovich, 1986).

Orthography is the writing system of language. The orthography of English consists of 26 letters that—singly or as groups (e.g., th, ng, tch)—represent the 44 phonemes in written words. Proficient reading comprehension relies on automatic associations of sounds and letters (Gough & Tunmer, 1986; Hoover & Gough, 1990; Perfetti, 1985).

Morphology deals with the meaningful parts of words—prefixes, roots, suffixes, and combining forms. As morphology combines phonology, orthography, and meaning, it bridges the gap between alphabetic reading (i.e., word-level reading) and comprehension (Adams, 1990; Goodwin & Ahn, 2013).

Semantics is the meanings of words and the relationships of words. A reader's breadth and depth of vocabulary contributes to reading achievement. It is necessary for readers to understand that many words in English have multiple meanings or shades of meaning, and they need to be flexible in their thinking about the meanings of words (Castles, Rastle, & Nation, 2018).

Syntax, which is subsumed under grammar, refers to the order and relationships of words in sentences as well as the structure of sentences in oral and written language. A reader's knowledge of pronoun references, verb tenses, and subject-verb agreement is predictive of reading comprehension (Foorman, Herrera, et al., 2015; Foorman, Koon, et al., 2015).

More recent research (Foorman, Herrera, et al., 2015; Foorman, Koon, et al., 2015) puts a stronger emphasis on academic language. Academic Language is important to understand the meaning of spoken and written language in the classroom (Nagy & Townsend, 2012). It goes beyond content area vocabulary, which people often think about when they hear academic language.

But academic language is not only the breadth of vocabulary; it is also the depth of students' vocabulary. It is the language and the relationships between words; the nuances of words (shades of meaning); figurative language, and the syntax (connective words, pronoun referents) and morphology. The importance of grammar and syntax grew as students were assessed in the upper grades.

HOW

Accelerate Learning - Think Quality not just Quantity (HOW)

Acceleration is often associated with intervention provided for students who are struggling vs. all students. However, in this current environment, all students have skills gaps and need some acceleration. Instruction is typically designed to provide one year of growth for one year of instruction. Intervention accelerates learning by intensifying instruction that provides more than one year of growth for one year of instruction. "The primary differences between instruction appropriate for all children in the classroom and that required by children at risk for reading difficulties are related to the manner in which instruction is provided" (Foorman & Torgesen, 2001, p. 206).

Like the science of reading, how the components of reading should be taught has been proven through research. Similar to the five components of reading, there are four elements of the manner of instruction:

Explicit (directly taught)

Systematic (simple to complex)

Cumulative (building on prior knowledge)

Multisensory (use of multiple senses or modalities).

In short, new concepts and skills need to be directly taught in a logical sequence that progresses from simple to complex, and in which new learning builds on prior learning or knowledge (Kirpatrick, 2015; NICHD, 2000; Seidenberg, 2017; Torgesen, 2004).

Other areas that are best practices for intervention and instruction include setting goals and objectives, focus on pacing, and consistent instructional routines (Foorman et al., 2003; Foorman & Torgesen, 2001; Arrasmith, 2003; & Rosenshine, 1986). These components are even more critical given the current remote learning environment.

The **goals and objectives** provide the roadmap for instruction. What will students know or be able to do as a result of the instruction? **Pacing** is the flow of instruction that maximizes instructional time. The pacing must be fast enough to maintain students' attention and engagement but slow enough so students are not overwhelmed, have time to think about information, and have opportunities to respond. **Instructional routines** incorporate a few simple steps or actions that reinforce learning. Consistent routines increase engagement and retention and add a sense of security as students know what to expect.

Key Elements of Instruction

How do these translate from classroom to online?

Goals and Objectives

Are the purpose and outcomes clearly evident in the lesson plans?

Does the student understand the purpose for learning the skills and strategies taught?

Do they understand what this "Zoom/Google Meeting" is about, what the purpose is?

Pacing

Is the teacher familiar enough with the lesson to present it in an engaging manner (when in an online environment or in the classroom)?

Does the pace allow for frequent student response (interaction is key online)?

Does the pace maximize instructional time, leaving no down-time?

Instructional Routine

Are the instructional formats consistent from lesson to lesson?

If students are familiar with routines, they can put more cognitive energy to learning the new skill and/or using Zoom/Google Chat, etc.

Foorman et al., 2003; Foorman & Torgesen, 2001; Arrasmith, 2003; & Rosenshine, 1986

The Role of Parents/Caregivers

Parents and caregivers, especially as they are stepping into the role of home teacher, are wondering about their place in their child's literacy journey. It is likely that we are putting unrealistic expectations on caregivers, beyond what we would normally expect of them in relation to homework, etc.

Expert guidance to schools and teachers is to set realistic expectations. Parents/caregivers are often trying to balance working from home and helping to manage their child/children's learning. We cannot expect them to understand the science of reading and become reading teachers. Schools should also not be expecting the home learning environment to mirror the exact 6 hours of the school day.

One of the biggest challenges in remote learning has been access to devices and connectivity. And once students had access to digital devices, parents worried about the effects of increased screen time on their children. Schools can help parents and students decrease screen time by providing activity ideas that allow the students to do something offscreen or even outdoors. Ideas might include: write about a new activity they have done during this home period; have a scavenger hunt for words that match new adjectives they are learning; or use chalk to write letters, or words, or prefixes on the sidewalk and have students jump to each one saying the item and a word that starts with it or the meaning. Finally, schools want to be sensitive to asking families to purchase new items that are not commonly found in the home. Instead, schools should encourage students and caregivers to leverage items already in the home, but in tasks related to building reading skills.

For example, some activities could include categorizing food items in cabinets or clothes in their closet. Categorization is a foundational reading skill. It teaches basic concepts such ***as same and different*** and allows students to become more aware of patterns. For example, how things are the same or different (e.g., these shirts have long sleeves, these shirts have short sleeves). This leads to understanding how to ***compare and contrast*** characters, settings, or elements in texts. Another idea involves using their smartphones to record a video of themselves making a "how to" video, using the sequencing words of first, next and last. This will help them with comprehension, but also their writing of a procedural, persuasive, or argumentative paragraph or essay.

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Summary

One thing is clear from initial COVID-19 survey data and anecdotal evidence—students experienced some level of disruption in their learning last spring and most have begun this school year with less than expected proficiencies or with gaps in their knowledge.

Based on summer slide research, science of reading recommendations, and intensive intervention, we recommend that educators think about the **why, what and how** concepts detailed above to identify and close learning gaps for their students. And we need to set realistic expectations for parents and caregivers and provide activities that can be done with items already within the home that don't involve screen time.

A Final Word

Two words are critical to keep in mind during these challenging times: flexibility and efficacy. Schools and districts need programs with flexible implementation models that can easily transition from classroom to remote environment and back again depending on the current climate. Blended learning programs that offer an online and a teacher-led component connected by data offer the most flexibility. It is also important to understand the efficacy research or the effectiveness of a program. We cannot wait until the end of this school year to find out that a program did not work and that students still have major gaps in their learning. Focusing on the why, what and how of instruction will address the urgent challenge and answer the question: What can we do about it and how do we close those gaps and catch them up?

About Lexia Learning

Lexia Learning was founded more than 30 years ago and is a leader in literacy education. Today, Lexia helps students build fundamental reading skills through its rigorously researched, independently evaluated, and widely respected instruction and assessment programs. For more information, visit www.lexialearning.com. "Lexia Learning" is a registered trademark and a division of the Cambium Learning Group.

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