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2023

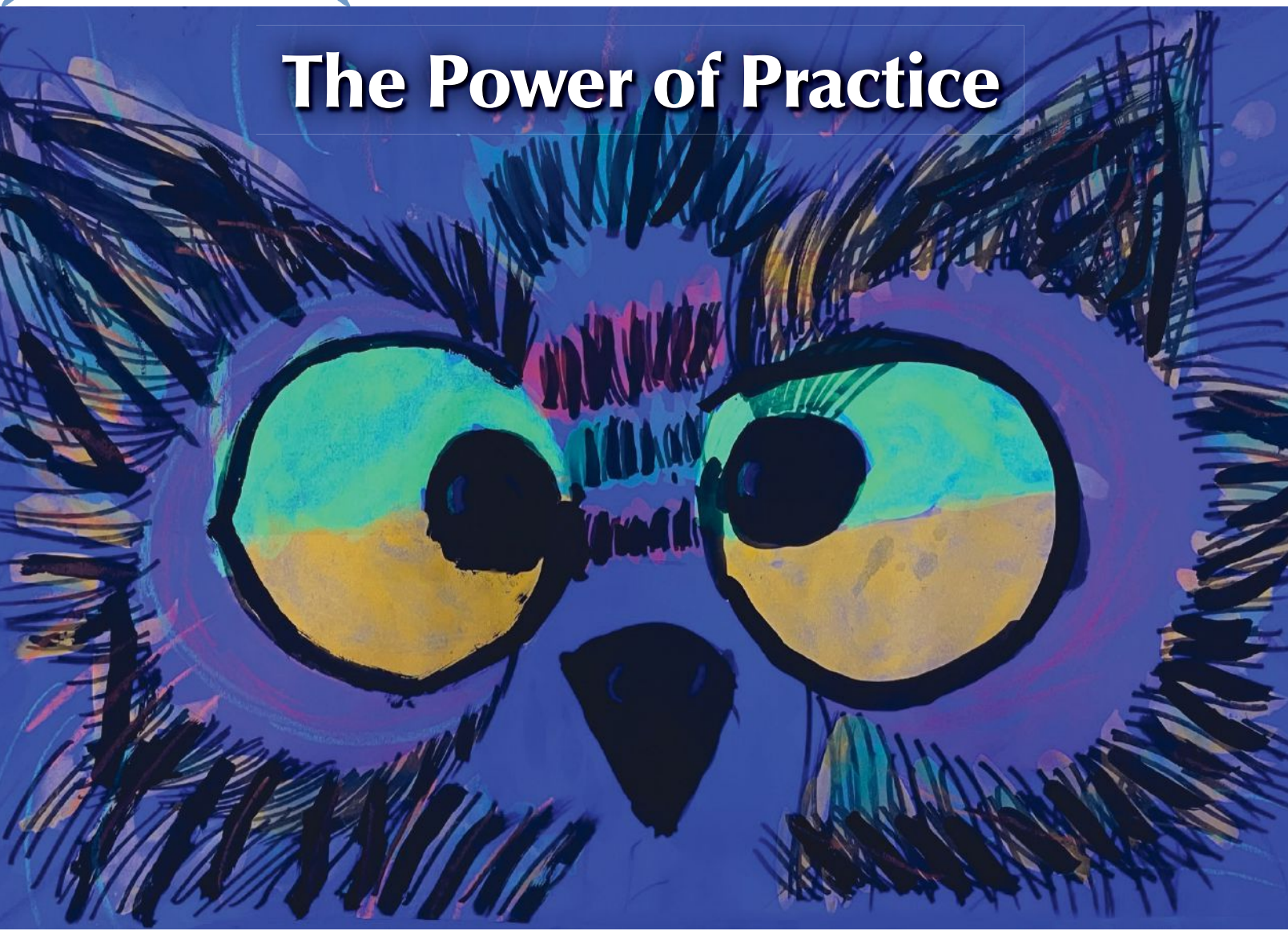
Nancy Chapel Eberhardt and Stephanie Stollar; Theme Editors

PERSPECTIVES

ON LANGUAGE AND LITERACY

A Quarterly Publication of the International Dyslexia Association

Volume 49 Issue 1



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PERSPECTIVES

ON LANGUAGE AND LITERACY

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MISSION

The International Dyslexia Association (IDA) is committed to creating a future for all individuals who struggle with dyslexia and other related reading differences so that they may have richer, more robust lives and access to the tools and resources they need.

The Power of Practice

ON THE COVER: Glow Owl by Elise Cox.

The International Dyslexia Association (IDA) is a 501(c)(3) non-profit, scientific and educational organization dedicated exclusively to the study and treatment of the specific language disability known as dyslexia. We have been serving individuals with dyslexia, their families, and professionals in the field for over 70 years. IDA was first established to continue the pioneering work of Samuel T. Orton, M.D., in the study and treatment of dyslexia.

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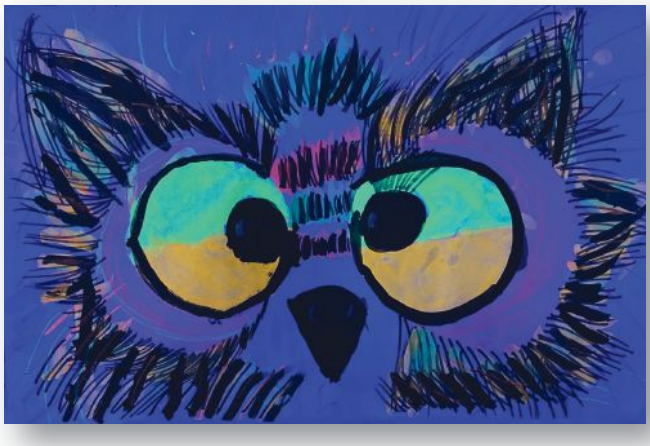
STRUCTURED LITERACY

Building Reader Competence with the Power of Practice

This issue's theme concerns the power of practice and its relation to developing competent readers. The goal of reading is to comprehend what is read. Comprehension involves developing many skills and subskills to the point of automaticity, that is, the ability to very efficiently perform those skills so that very little cognitive energy is exerted in the process. To reach automaticity, a person must repeatedly engage in that activity, receive feedback on his or her performance, make corrections in their behaviors, and continue to engage in that behavior. Learning to do anything with a high level of efficiency and skill requires practice. Reading is a complicated behavior that requires lots of practice.

For most people, learning to read is a very effortful act that requires an enormous amount of cognitive exertion. As beginning readers become proficient in recognizing the relationship between the sounds of their language and its written representations, and they become more proficient in decoding and synthesizing (blending), fewer cognitive resources are needed to engage in those processes and more cognitive resources can be applied to other aspects of reading. Indeed, one of the goals of reading acquisition is for word recognition to become instantaneous. As word recognition becomes automatic, reading comprehension improves.



Glow Owl by Elise Cox

For practice to be meaningful and effective, it must also be explicit, focused, and targeted. Additionally, said practice must be based on current scientific knowledge, not conjecture. This is obviously the case for learning to read, spell, and write. We have seen the disastrous effects of non-science-based instruction, which has led to the beginning of a renaissance of reading: a renewed, intense focus on the use of science to provide direction in all things related to reading, spelling, and writing.

Those who provide reading, spelling, and writing instruction understand the important contribution that science has made to our understanding of reading development. They are now interested in knowing **how** to provide science-based instruction so that their students and children can become competent readers. This issue addresses an extremely important aspect of reading, spelling, and writing instruction: practice. Becoming competent in any behavior or ability requires appropriate practice, and the authors in this issue describe very helpful and informative aspects of practice. This issue will help teachers, families, and administrators understand the components, importance, and mechanics of practice.

David P. Hurford, Ph.D.
Editor-in-Chief

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The Power of Practice

by Nancy Chapel Eberhardt and Stephanie Stollar

KEY TAKEAWAYS

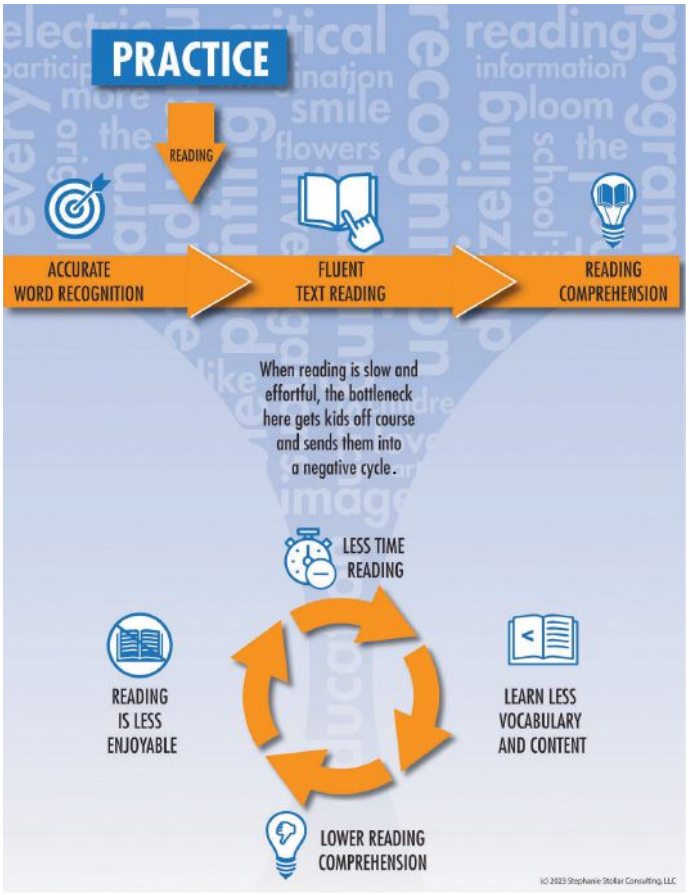
- Practice is a factor in closing the gap in achievement.
- Practice is a key element in the teaching-learning process to facilitate learning outcomes.
- Practice is where the science of reading and the science of learning merge.

To become efficient readers, students must develop many reading subskills to the point of automaticity. Appropriate, sustained, and intensive practice is essential to developing automaticity. This issue of *Perspectives on Language and Literacy* explores practice—what it is, why it is important, and how to do it. To answer these questions, this issue draws upon what we know from the science of learning, particularly as it pertains to learning to read. According to Vaughn (2021), practice leads to automaticity, which is "tied to the brain reorganization that must occur in order for children to read." Seidenberg explains that practice linking together multiple dimensions of words can contribute to necessary brain reorganization and automaticity (Seidenberg, 2017).

The articles in this issue provide views on the purposes of practice and highlight its importance on learning outcomes. In their article, "The Instructional Hierarchy: Connecting Student Learning and Instruction," VanDerHeyden and Burns begin this issue with an exploration of an instructional hierarchy. They focus on what science has taught us regarding the stages of learning, including behaviors indicative of students at each stage and the instructional response needed for students in those stages. In "The Practice Gap," Vaughn and Fletcher discuss the consequences of insufficient or inappropriate practice,

Continued on page 8

particularly for the most vulnerable students. The negative cycle that is the consequence of insufficient practice—the bottleneck—is captured in the following graphic. Sufficient practice can prevent or interrupt the negative cycle that keeps students from spending enough time interacting with text to become proficient readers.



The information in the opening articles sets the stage to examine how we teach and incorporate practice into instruction. In "What Do We Mean by *Practice*?" Archer provides a careful description of the gradual release model in her video "Why Explicit Instruction?" Jamie Clark's one-pager, *Explicit Instruction, Direct and Engaging Teaching,* illustrates how practice is a component of instruction. Then, Peavler clarifies terminology related to practice and annotates a lesson to illustrate practice in Structured Literacy lessons.

Next, we explore the role of assessment in making decisions about what to practice in Stollar's article, "Using Assessment to Efficiently Match Students to Effective Practice." Stollar emphasizes that the use of data helps to ensure strategic practice to guide the focus and duration of work on particular literacy skills. She makes the case that the strategic use of data is essential to accelerate learning.

The use of data helps to ensure strategic practice to guide the focus and duration of work on particular literacy skills.

With the connection between assessment and instruction as the frame, the next sequence of articles looks at a range of instructional approaches to expand our perception of what practice looks like. First, we look at the role of decodable text as a means of transitioning between word recognition and reading comprehension. Setmeyer provides this examination in "The Role of Decodable Text in Providing Purposeful Practice Opportunities." Lauren expands on the contribution of decodable text in a recorded conversation titled "Decodable Text and Its Impact on Early Literacy Acquisition — Exploring the Data" in which educators share data supporting the impact of decodable text on reading outcomes. In "The Word Knowledge Network Helps to Close the Practice Gap from Sound to Syntax," Ferlito and Eberhardt explain the need to practice all layers of language to develop fluency and comprehension.

Next, in "Partner Reading Paragraph Shrinking: An Opportunity for Practice," Kemeny explains how an instructional routine increases the amount of time students spend reading and improves student fluency rates. Gillis and Eberhardt illustrate how literacy instructional routines can be applied across all subjects to integrate literacy instruction throughout the school day. In "More Time for Practice: Integrate Literacy Across Content Subjects," they explain how this approach facilitates application and transfer of literacy development and improves acquisition of content area knowledge, particularly for upper grade students. Finally, Kastner provides a resource link for instructional routines. This resource section provides a series of infographics and links that further expand the many dimensions of practice.

Butler concludes this issue on practice with a review of *Make it Stick: The Science of Learning* (Brown, Roediger, & McDaniel). Butler makes a compelling case for improving teachers' understanding of how we learn and why practice is an integral part of that process.

At a time when educators feel the pressure to cover the content rather than get kids to mastery, it is easy to lose track of what we know about the continuum of learning, with the unintended consequence of rushing, rather than ensuring, learning. In short, we haven't elevated the role of practice for its significance in acquiring proficiency. We can lose sight of the full scope of Structured Literacy, namely what and how we teach. Throughout this issue, we examine the relationship between the science of learning and the science of reading with the goal of improving both instructional practice and learning outcomes. In the end, practice affords us a way to avoid the negative consequences of learning bottlenecks and ensure better reading outcomes for all.

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The Instructional Hierarchy
Connecting Student Learning and Instruction

By Amanda M. VanDerHeyden and Matthew K. Burns

KEY TAKEAWAYS

- **Students progress through three phases when learning something new, and the instructional activity must match the phase in which the student is functioning.**
- **Interventions are evidence-based only if they consider learner characteristics, specifically students' existing skill proficiency.**
- **Timed assessment data measure fluency of a skill and are necessary to identify interventions for individual students.**

The Instructional Hierarchy: Connecting Student Learning and Instruction

The emergence of a more rigorous evidence base in education over the last two decades may tempt some educators to believe that an evidence-based intervention can simply be installed into an existing program of instruction and return results that are comparable to those reported in research studies. Yet, such a premise is flawed as no evidence-based intervention can ever be similarly effective all the time for all students in all learning environments (Shonkoff, 2017). Rather, evidence-based interventions are a good starting place, but the intervention must be selected based on the student's needs. Formative or diagnostic assessment of student learning directs us to interventions with a strong research base that also matches the needs of learners at that moment of instruction. Using a very simple example of this logic, a teacher understanding whether or not a student can accurately respond to a certain type of math problem or decode a specific type of word can tell the teacher that efforts to build accuracy are no longer needed for that student and the instruction and type of practice can change (e.g., allowing independent skill practice).

The instructional hierarchy (Haring & Eaton, 1978) is the scientific framework that connects student performance to instructional actions. The instructional hierarchy was developed during a time of rapid research discovery in data-based decision-making that used brief low-inference measures of student learning (e.g., curriculum-based measurement or CBM) obtained during the usual course of instruction as a way to determine how to adjust the instruction going forward (increase task difficulty? Add a period of independent practice? Stick with immediate corrective feedback?). According to the instructional hierarchy described by Haring and Eaton, human learning moves through four phases: acquisition, fluency-building, generalization, and adaptation. Because generalization and adaptation are both forms of generalization, we treat those as a single phase in contemporary work. Table 1 displays measures and criteria to determine students' phase of learning in math and reading.

Acquisition

When students are in the acquisition stage of learning, their performance is described as *frustrational*, which is characterized by effortful/labored, slow, hesitant performance with a low rate of responding and a higher probability of inaccurate responding. Teachers can assume that most students will require acquisition support whenever a new skill is introduced. Performance can also be measured directly to inform a more precise and sophisticated formative or diagnostic assessment process to develop and adjust interventions. As shown in Figure 1, acquisition intervention strategies are designed to build accuracy through guided practice including modeling, using exemplars of correct and incorrect responding, prompts or cues, immediate corrective feedback, and providing more elaborate feedback as needed to help students understand why a given response was incorrect and how to deliver the correct response. A hallmark of effective instruction for acquisition is engineering task materials and teacher behaviors to limit the occurrence of errors in general and to detect and respond to errors to prevent and correct student misunderstanding (Engelmann, 1993). In summary, students in the acquisition stage of learning do not know how to perform a skill. They transition to the next phase of learning when they understand how to respond correctly but doing so is labored and requires considerable effortful focused attention to respond correctly.

Abbreviations

CBM: Curriculum-Based Measurement
LSF: Letter Sound Fluency
NWF: Nonsense Word Fluency
ORF: Oral Reading Fluency
WID: Word Identification Fluency

Table 1

Assessments and Criteria to Determine the Student's Phase of Learning

Academic Area	Measure	Acquisition Instruction Needed	Fluency-Building Instruction Needed	Generalization Instruction Needed
Reading Fluency	Oral Reading Fluency (ORF)	0-92% correctly read words ORF below benchmark	93-97% correctly read minute ORF below benchmark	ORF at or above benchmark
Reading Phonics	Letter Sound Fluency (LSF) Nonsense Word Fluency (NWF)	0-89% correctly read sounds LSF or NWF below benchmark	90-100% correctly read sounds LSF or NWF below benchmark	LSF or NWF at or above benchmark
Reading Spelling	Spelling Test	0-89% correctly spelled words Number of correctly spelled words below benchmark	90-100% correctly spelled words Number of correctly spelled words below benchmark	Number of correctly spelled words at or above benchmark
Reading Sight Words	Word Lists	0-89% correctly read words Word Identification Fluency (WID) below benchmark	90-100% correctly read words WID below benchmark	WID at or above benchmark

Fluency-Building

When students are in the fluency-building stage of learning, their performance is described as instructional, which is characterized by faster rates of behavior. Errors tend to dissipate as children enter the instructional range of performance. In the fluency-building stage of learning, students will experience an uptick in growth that is an acceleration over their rate of improvement obtained during the acquisition phase if the students are provided with fluency-building instruction such as providing opportunities to respond (practice) on controlled practice materials, setting goals for more proficient performance, rewards for performance improvements, and delayed error correction. One critical feature of instructional level performance and fluency-building instruction is that teachers can only know whether a child's performance is in the instructional range if they are conducting timed assessment as is conventional in curriculum-based measurement (CBM).

Although some teachers have questioned the importance of timed assessments in learning, timed assessment is necessary for a number of reasons. First, percent correct has an extremely limited range (e.g., 40% to 100%; VanDerHeyden & Solomon, in press), which limits its sensitivity to detect meaningful performance differences. Imagine two learners, both of whom score 100% accurately on an untimed sample of problems. The first learner can easily and immediately respond to a specific problem with the correct answer, can readily explain their problem-solving logic, or teach a friend

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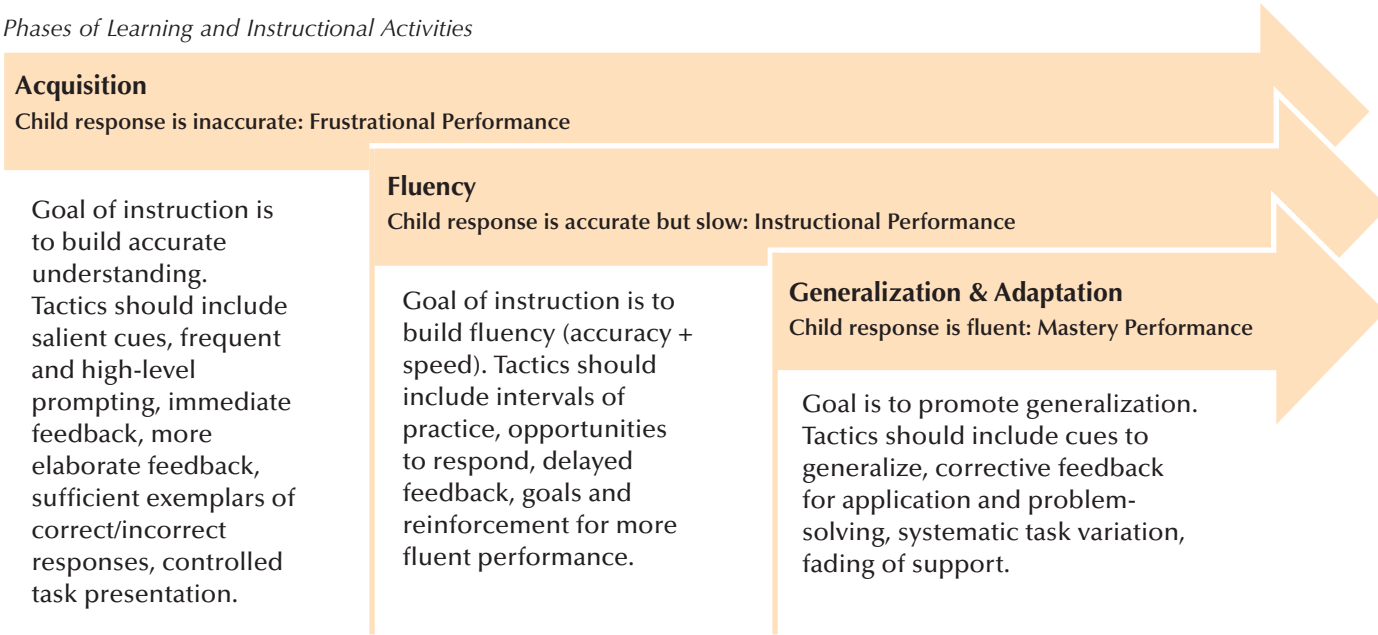
Figure 1

Phases of Learning and Instructional Activities



Note. Used with permission from Kovaleski et al. (2022).

how to solve the same problem. The second learner has to begin by drawing hash marks and counting or finding known problems and counting up or back to solve the problems at hand. The metric of percent correct does not distinguish these two learners and that is the limitation of percent correct. If, instead, both students are given a standard set of problems to work during a specific time interval, the first learner will complete many more problems accurately than the second student. Thus, timed assessment creates a score distribution that allows teachers to more sensitively determine the students' need for fluency-building instruction and to detect continued performance improvements as instruction continues. Second, rapid performance is what allows students to be able to generalize the skill, which also transitions them to next phase of learning. Timed assessment is more commonplace in reading and reading performance distributions follow the same pattern of accuracy and fluency scores being highly correlated such that fluency alone offers a continuously useful basis for characterizing reading performance from initial acquisition to fluency building to generalization. Further, fluent (effortless) decoding is a prerequisite for more complex reading behaviors such as comprehension.

Generalization and Adaptation

Haring and Eaton treated the final two stages of learning separately, but more contemporary work groups these together because they are both, in effect, forms of generalization (Kovaleski et al., 2022). When students are in the generalization stage of learning, their performances are described as being at mastery, which is characterized by a near absence of errors, high rates of correct responding (automatic responding), and a worsening trend of performance as the behavior approaches a natural ceiling. When student performances are at mastery, they are most likely to be able to generalize their learning to read novel text or respond successfully to novel but related tasks. Students in these last two phases are also most likely to be able to adapt their responses as they are reading to learn. So given a math example, students who are at mastery for multiplication 0–9 may respond successfully when given a more challenging multiplication problem (e.g., 10 x 12) or they may be able to identify the missing factor in a given factor pair that produces a specific product. Generalization is like "free learning," meaning that it represents new or novel performance that the teacher did not have to teach directly, but instead emerged from the careful sequencing of content and instruction to sow the seeds in fertile ground for generalized performance to occur. Thus, generalization instruction involves providing application opportunities to students while monitoring responding to detect the need for instructional support if the desired generalization does not happen. In summary, independent-level performance is flexible, adaptable, useful to the learner, and enduring.

The Importance of Aligning Student Need to Instruction

The alignment between student need and instruction/intervention has been called a skill-by-treatment interaction (Burns et al., 2010), and has consistently led to positive effects (Burns et al., 2022). Not aligning intervention to phase of learning can lead to reduced learning. Teachers who move on to new content without building fluency and generalization disrupt skill mastery and lose the efficiency of performance improvements that occur during fluency-building and generalization. Likewise, when students are in the fluency-building or generalization stages of learning and they are provided with acquisition support, their performance will actually worsen rather than improve. One very common error in reading instruction is to provide students with inquiry or discovery-based instruction when students are in the acquisition stage of learning. If teachers understand the instructional hierarchy, then they can shift some of the most commonly misaligned tactics into alignment. Such tactics (discovery learning, productive struggle), if they are to work at all, and we are optimistic they could, are most likely to work if they are provided during the generalization stage of learning. Thus, one important takeaway is to understand that interventions are evidence-based only in reference to learner characteristics, specifically their existing skill proficiencies.

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Both authors have published a number of books and materials that are designed to improve K–12 instruction for which they receive royalties.

IDA Announces 2023 Distinction of Service Award Honorees

The International Dyslexia Association (IDA) is pleased to announce **Nancy Cushen White, Ed.D.**, and **Becky Xi Chen, Ph.D.**, as this year's **Distinction of Service Award Honorees**. This newly established award will be presented during the Opening Session of our 2023 Annual Conference.

The **Distinction of Service Award** was created to recognize an individual who has made significant contribution as a volunteer in a leadership role for IDA at the local, state, national, or international level in any of the following capacities: Editorial board or committee leadership, program delivery, community outreach, fundraising efforts, marketing and communications, and governance responsibilities.

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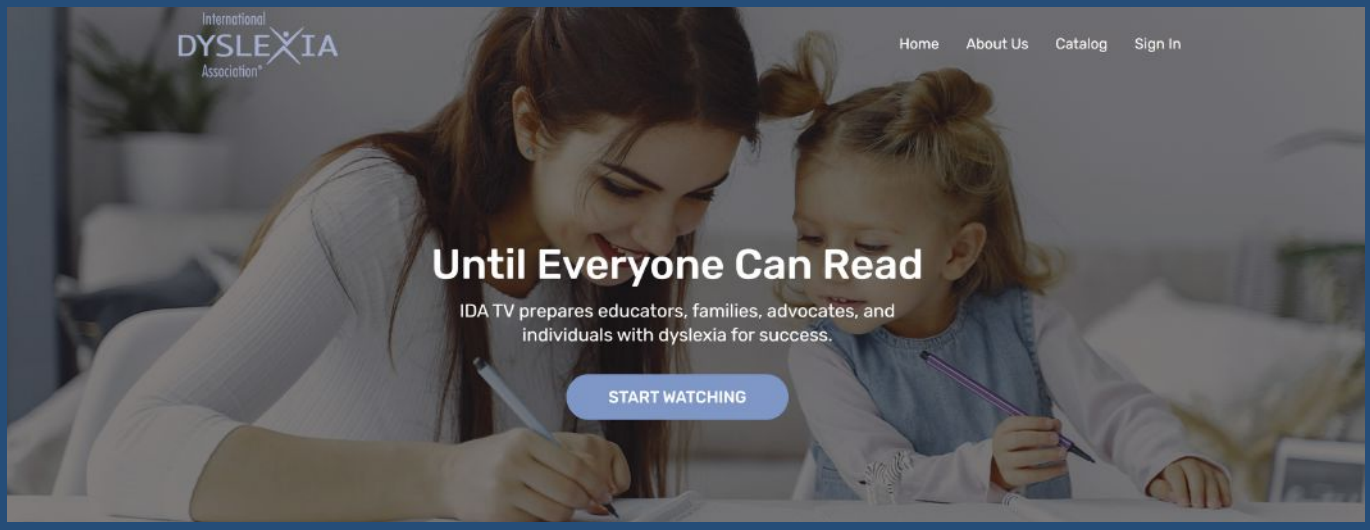

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The Practice Gap

By Sharon Vaughn and Jack Fletcher

KEY TAKEAWAYS

- The practice gap contributes to the challenges experienced by students with reading difficulties and disabilities.
- Students with weak reading skills are less efficient and read more slowly, contributing to reduced practice.
- Expert performance results from *active engagement* in *deliberate practice* with teachers or coaches monitoring the structured, organized practice.

How is it that a successful golfer's swing can appear so effortless, smooth, and consistent? Is it because the individual is just "gifted" in golf? It is convenient for us to think that whoever performs well, whether it be musically, in sports, or preparing a gourmet meal with ease, are individuals who have a proclivity for success in these areas. However, this way of thinking is mistaken. The best explanation for most success is practice. Deliberate, structured, and sustained practice is the "magic" that provides opportunity for success in almost any field. In this article, we present a rationale with suggestions for the role of deliberate practice in improving reading outcomes for students with significant reading problems. Though not explaining all of the reading difficulties that students experience, adequate deliberate practice reading is a highly influential lever for improving outcomes for students with reading difficulties and disabilities (RDD).

The Practice Gap in Reading

Vaughn and Fletcher (2021) proposed that the practice gap in reading explains many of the reading challenges students with RDD experience. Figuring out how to close the practice gap will provide a valuable pathway to improved outcomes. The number of words a student can read automatically, at a glance, influences significantly the student's efficiency as a reader and, thus, their reading fluency. Word reading fluency (i.e., reading words typically in connected text accurately and automatically) is a necessary step to improving overall text understanding. For many students with RDD, automatic word reading is a bottleneck because these students often display slow and labored word reading impairing their understanding of text. There are at least two unfortunate outcomes of this labored word reading: (1) these students use an abundance of cognitive resources to decipher words, leaving minimal cognitive resources to remember, integrate, and comprehend ideas while reading; and (2) the effort necessary to read words reduces interest in reading, and thus students with word reading difficulties spend considerably less time reading. As with all other activities, when we experience consistent challenges with little success we also have reduced motivation and engagement. The hallmark of students with significant word reading difficulties is that they do not read for pleasure—reducing considerably their access to print and, thus, reducing practice. To illustrate the negative effects of not reading extensively, fifth-graders who are very proficient readers read more in a few days than poor readers do in a year. This gap in practice is very profound and contributes to many significant problems, including low fluency, inadequate vocabulary development, and the opportunity to build background knowledge—an essential feature of improved comprehension.

Vaughn and Fletcher (2021) proposed that the practice gap in reading explains many of the reading challenges students with RDD experience.

Further, the development of automaticity through practice is tied to the brain reorganization that must occur in order for children to read. Fluent readers seem to recognize whole words instantaneously, which Seidenberg (2017) described as "language at the speed of sight." Underlying what seems to be effortless word recognition is a brain system involving the fusiform gyrus, which has been described as the brain's letterbox (Dehaene, 2009). This system develops through structured and meaningful exposure to print almost as soon as the beginning reader develops the capacity to link print and sound. This system does not emerge without exposure to print because it is attuned to the statistical probabilities by which letters and morphemes occur in print (Seidenberg, 2017). What seems like

Continued on page 16

Abbreviation

RDD: Reading Difficulties and Disabilities

whole word recognition is actually the brain's growing capacity for processing increasingly large chunks of words so that eventually a reader can go directly from the word to its pronunciation and meaning. If a child is delayed in their access to print and, therefore, does not have the opportunity to practice reading, the system will be delayed in its reorganization. Thus, the *practice* gap is an extraordinary consideration and is directly tied to the development of the neural systems that permit rapid word reading. Students with weak reading skills are less efficient and read more slowly, contributing to reduced practice. Continued low exposure to word reading over time has a cumulative effect beyond reading successfully. It slows the development of vocabulary and background knowledge, which then reduces comprehension, which then makes reading less enjoyable—and even less likely to be practiced. Is it any wonder that students with significant reading problems display such profound challenges with reading comprehension and content knowledge, and that this gap becomes more problematic as they advance through the grades?

The practice gap is an extraordinary consideration and is directly tied to the development of the neural systems that permit rapid word reading. Students with weak reading skills are less efficient and read more slowly, contributing to reduced practice.

How Practice Works

How is it that practice works? Practice serves to promote chunking, which is the cognitive process by which familiar parts are put together in efficient and more easily remembered ways. For example, common letters and their sounds /aight/ as in *straight* can be chunked so that the unit /aight/ serves as one chunk to remember rather than all of the individual letters.

Figure 1

Word Reading Practice: Single and Multisyllable Words with dis, in, im, ing, ed

dis, in, im	ing, ed	MIX	MIX
Impatient	Worked	Aging	disappear
Incomplete	Watched	Immerge	incapable
Incorrect	Ending	Dislike	developed
Dislike	Swinging	Produced	discontinue
Discontinue	Aging	Distant	intercept
Immortal	Passed	Incomplete	united
Incapable	United	Rising	passed
Immerge	Allowing	Include	incorrect
Dishonest	Produced	Inactive	lying
disorganize	Using	Allowing	using
Incorrect	packed	Locked	incredible
Distant	Locked	Stopped	worked
incredible	Sliding	Swinging	disagree
disappear	stopped	Immortal	sliding
Include	developed	Impossible	hopped
important	anything	Packed	impatient
Inactive	Fixed	Incorrect	fixed
Disagree	hopped	Watched	ending
Intercept	Lying	Important	dishonest
Impossible	Rising	Disorganize	anything

Note. www.meadowscenter.org

Figure 2

Vocabulary Teaching Map

Definition	Characteristics
Student-friendly description of the term (usually provided by your teacher)	Facts or features that help you recognize, identify, or distinguish the term
term	
Examples	**Nonexamples**
An example must be: • A specific, real-world application of the term • Something that fits all of the characteristics of the term	A nonexample must be: • An incorrect, or inappropriate, real-world application of the term • Related to the term but not an example of the term • Something that does not fit all of the characteristics of the term

Definition	Characteristics
Something that can be changed physically without changing chemically	• Can be measured • Describes an object • Includes information that can be observed without changing the matter into something else
physical property	
Examples	**Nonexamples**
• Color • Texture • State (solid, liquid, gas) • Boiling point	• The way a material behaves in a chemical reaction • Chemical properties • Something that can be observed only when a substance changes into a different substance

Example of a Completed Frayer Model

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This type of chunking can occur inferentially with practice paired with explicit instruction. In chess, for example, this type of chunking process permits master chess players to store in long-term memory chess pieces and their position on squares, relieving the cognitive load of thinking about each move independently and allowing chess players to think in more efficient units of decision-making (Walls, 2015). Interestingly, a chess master's chunking unit is about 50,000 which is similar to the number of vocabulary words needed to learn a new language (Wall, 2015). Practice reading related words can also serve as a way to make associations between common word reading principles so that we learn to generalize these principles to a broader range of words. Figure 1 provides examples of related words and how practice seeing these related words in a range of contexts might support word reading fluency and generalization of the principle to reading related words.

This idea of practice also relates closely to acquiring the meaning of words through explicit instruction and implicit learning, which Share (1995) described as "self-teaching." We know that vocabulary plays a very powerful role in reading comprehension. Knowing the meaning of words is an essential feature for understanding the larger units of text and, thus, promoting reading for understanding. However, we simply cannot teach youngsters explicitly the meanings of all the words that they need to know. In order to be extremely knowledgeable about words and their meanings, students must also engage in implicit word learning. Research has examined the number of times students need exposure to a word in text to acquire meaning, and the range is quite large, from six to more than 20 encounters (Rott, 1999; Waring & Takaki, 2003). Of course, this means that learning the meaning of new words requires engaged practice over time—just like learning to read words. Implicit word learning contrasts with explicit word learning where the meaning of the word is explicitly taught and then practiced in specific ways. See Figure 2 for an example of explicit vocabulary instruction using a word map to introduce a key word, its meaning, and then provide practice using the word orally and in writing. Recognizing that all words cannot be taught explicitly, we have learned that this explicit approach can be exceedingly helpful in establishing knowledge of essential words for content reading, yielding improved vocabulary learning for students with reading difficulties (Vaughn et al., 2014).

Deliberate Practice

Ericsson (2008) described expert performance as resulting from *active engagement* in *deliberate practice* with teachers or coaches monitoring the structured, organized practice. Critical to understanding expert performance in reading requires applying these two constructs. *Active engagement* means that the learner is motivated to succeed in the defined task and is working to achieve well-specified goals. For example, in reading, the student may be eager to master reading word lists of related words and to master reading these words increasingly automatically with an ultimate goal of 20 seconds or faster (Vaughn, et al., 2022). *Deliberate practice* is also a necessary component of expert performance and is different from what we might think of as typical practice. Deliberate practice has specific goals

Continued on page 19

Figure 3

Effective Fluency Practices

Using findings from two syntheses of the research on reading fluency as a guide (Chard, Vaughn, & Tyler 2002; Stevens, Walker, & Vaughn, 2017) the following fluency practices are associated with improved reading performance for students with reading difficulties.

Repeated Word and Phrase Reading	Use deliberate repeated reading of word list reading, and phrase reading to improve students' fluency of reading challenging words independently and in text.
Repeated Reading with a Model	Select a text that is challenging but not too difficult and model reading the text fluently and with expression. Ask student(s) to then read the same passage in the same way with you. Then ask students to read the same passage to a partner providing feedback for missed or challenging words. Finally, ask students to read the passage to themselves identifying any words that are challenging and providing feedback so that they can practice those words.
Set a Performance Criteria for Rate and Accuracy of Reading	With the student, establish a challenging but achievable goal for the rate and accuracy of reading. Practice reading appropriate passages providing feedback and measuring students' performance toward the established goal.

Figure 4

Provide Meaningful Feedback to Enhance the Effects of Practice

Provide feedback that is clear, focused, and directly related to the learning task and that guides the student to continue and/or adjust learning practices.

Scenario 1	After a lesson on essay organization, a teacher meets with a student in an essay conference. The teacher provides feedback on only organization and not the various grammatical errors throughout the essay. The teacher plans to review grammatical errors in another lesson.
Scenario 2	A teacher quickly creates a question and ask students to answer it on sticky notes to turn in before going to the next class. The teacher uses the information about students' needs from the sticky notes to make adjustments to the next day's lesson.
Scenario 3	Instead of saying, "Check comprehension answer 3," a teacher says, "Great work on answering question number 4. Skip to the challenge question on the next page. Remember to check your notes for vocabulary that are used in that comprehension question."
Scenario 4	During a fluency lesson, a teacher says, "I will start by reading this passage aloud. Then, we will read it aloud together. Finally, you will read it aloud on your own with a partner." This sequence is known as "I do," "We do," "You do." Pause after each reading and reread sentences where there was a challenging word.
Scenario 5	After introducing a new skill or concept, effective teachers guide students through participation and practice opportunities. Much of learning occurs through timely and specific feedback that leads to a change in understanding. Effective feedback may be immediate, especially for discrete tasks such as spelling or sounding out a word, to avoid any misunderstanding. Feedback may also occur after a short delay for more complex tasks, such as writing a paragraph, to allow students to think through the process. Timely feedback has three purposes: (1) to prevent inaccurate practice, (2) to increase the rate of student mastery, and (3) to ensure successful, efficient learning.

Note. Source: The Meadows Center for Preventing Educational Risk, 10 Key Documents, www.meadowscenter.org

with related tasks and activities and is conducted with teacher or coach feedback and additional practice. This additional practice may be repeated reading for a deliberate purpose, for example, practicing reading challenging words correctly, improving the speed of reading a designated phrase, sentence, or chunk of text. Figure 3 provides examples of how teachers use fluency routines. Another approach involves reading a wide range of text where materials are selected just below the child's reading level with an expectation of independent reading for 20 minutes daily and class follow-up in small groups (Vaughn et al., 2022).

There are four components to deliberate practice: 1) well-defined goals, 2) interest in achieving specified goals, 3) feedback, and 4) opportunities for additional practice. As we think about developing opportunities for deliberate practice for our students, consider the above-mentioned components and how you might ensure that they are represented within your instructional routines. Because interest in achieving specific goals is a necessary component, it may be useful to secure students' interest in achieving specific goals and then to identify the well-defined goals that are expected. This goal setting can lead to goal monitoring (progress monitoring) which serves as a built-in feedback loop to keep students engaged and on track. In addition to the feedback provided through progress monitoring, teachers might consider some of the feedback suggestions offered in Figure 4.

Building the Reading Brain

Teachers of students with RDD need to consider many elements of learning to read with perhaps the most important being opportunities to utilize deliberate practice to build the reading brain. Deliberate practice includes setting goals, monitoring these goals, and providing specific and well-defined reading tasks that are practiced with teacher feedback and support. Deliberate practice targets students developing reading skills and provides opportunities for reading extensively.

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What Do We Mean by *Practice*?

By Jamey Peavler

KEY TAKEAWAYS

- Different forms of practice accomplish different purposes.
- Simply providing more practice is not as effective as providing the right practice.
- A well-designed lesson incorporates practice in meaningful ways, following a gradual release of support structure.

Explicit instruction is an essential component of structured literacy; practice is an essential component of explicit instruction. In this video, Dr. Anita Archer defines explicit instruction and addresses several misunderstandings, including the common belief that explicit instruction is boring and decreases motivation to learn. She shares the research findings about when and with whom explicit instruction is more effective than discovery learning. Across the three steps for teaching skills (demonstration, guided practice, and checking for understanding), she clarifies the importance of ample opportunities for deliberate, spaced, and retrieval practice. Dr. Archer reminds us of the central role instruction plays in student learning.

Jamie Clark's one-pager, *Explicit Instruction, Direct and Engaging Teaching*, illustrates how practice is a component of instruction. This illustration points out the pervasive nature of practice in the instructional process.

Practice: Type, Time, and Support

Within a well-designed explicit instruction lesson, many opportunities for purposeful practice are provided to students. By thinking through the *type*, *time*, and level of *support* each form of practice provides, we are better prepared to match our purpose to the right practice activity. Practice *type* refers to the organizational structure of practice items and activities. How items are grouped can have an impact on the level of effort required and the rate at which the skill is acquired. *Time* relates to whether practice items are concentrated within a short period of time or spread out over multiple sessions. Multiple repetitions within a narrow time frame support quick acquisition; revisiting that content again over time supports long-term retention. The level of *support* illustrates the degree of support provided to students during the practice session. As students become more proficient, gradually reducing support is essential.

The following table illustrates how different practice opportunities may be organized within a lesson. Each section of the table defines the form of practice, its purpose, and an example of what each form might look like in a lesson.

Type
Blocked practice groups items with the same skill or process together. This organization supports quick skill acquisition by providing repetition in a controlled order, improving accuracy and automaticity. This structure benefits new content but may create a false sense of security. Students who perform well on content in blocked practice may need help to retain, apply, or generalize the skill. *Example:* Pattern-based word list grouping words containing the same pattern together. *Please read down each column.* **oa** / **ai** / **ea** r**oa**m / cl**ai**m / pl**ea**d fl**oa**t / g**ai**t / wh**ea**t cl**oa**k / str**ai**n / str**ea**m bl**oa**t / qu**ai**nt / sh**ea**th
Mixed or **interleaved** practice combines items with various skills or processes in random order. This organization supports effortful retrieval, improving retention. Students who perform well on content in mixed or interleaved practice are better prepared to retain, apply, and generalize the skill. *Example:* Word list containing a variety of known skills or patterns in random order. *Please read down each column.* plead / strain / roam float / stern / stream quaint / calm / scorn hurl / cloak / sheath wheat / gait / bloat

Time

Massed practice limits periods of rest between practice sessions. Content practiced in this setting might not be revisited. This practice supports the retrieval of information only needed for a short time. Retention of material practiced in a massed structure decreases over time. Like blocked practice, this may create a false sense of security that the content is mastered.

Example: Weekly vocabulary lists that may be practiced throughout the week within the context of a story but not used out of that context or incorporated into classroom discourse.

harbor	entrust	frenzy
maintain	meander	immense
wharf	scowl	charter

Spaced or **distributed** practice incorporates periods of rest between practice sessions. This may occur in set intervals or varied intervals. Periods of rest create opportunities for forgetting. Forgetting benefits effortful retrieval, and effortful retrieval improves long-term retention of knowledge. Gradually increasing the rest periods between practice sessions increases the chances of retained knowledge. Students get closer to mastery of learned content when practice items also increase in difficulty or support the application and generalization of prior knowledge.

Example: Sorting previously learned vocabulary words by attribute, generating synonyms and antonyms, or creating analogies.

harbor	entrust	frenzy
maintain	meander	immense
wharf	scowl	charter

Support

Guided practice involves carefully creating opportunities for students to apply skills or processes with supervised support and feedback. This practice is most effective with content that is not yet accurate. In this setting, teachers can carefully observe students to adjust practice items or work side by side through activities to provide clarification.

Example: Sorting word cards according to their syllable type.

As you place each card in the correct column, tell me what helped you decide where to place that card.

Open	Closed	VCE	NOT
wide, flu, past, trade, she, plum, drain, coat, brake, steep, try, up, see, poke, yet, frame, stash, brick, bland, spy, vent			

Prompted practice incorporates verbal reminders or visual supports to assist students in applying information. Prompts are scaffolded with the intent of gradually reducing support. This practice often serves as a bridge toward independent practice.

Example: Verbal or visual prompts reminding students how to divide multisyllabic words.

Use the steps below to divide and pronounce each word.

- Underline the vowels and …
- Label the consonants between them …
- When you see VCV, …

Independent practice is only effective with skills the student can perform accurately but not automatically. Therefore, this form of practice should be used only when students no longer need corrective feedback.

Example: Spelling activity where students apply knowledge of spelling generalization.

Use the template below to practice applying the e-drop rule.

save + ing	trade + ed	charge + ing
time + er	fame + ous	large + est

Applied practice places students in a setting where content is generalized outside of the context it was introduced and previously practiced.

Example: Connected text passage combines new and reviewed content and requires students to apply knowledge of known content to unfamiliar words.

As we stood on the coast, we could hear the steamboat approach. Soon we could see the bright yellow hull off in the distance.

Continued on page 23

Figure 1

Lesson Templates

Massed practice concentrates multiple repetitions in short periods, limiting rest periods between practice sessions.

Guided Practice: Supervision with immediate feedback supports learners to try out new skills in a highly-supported structure.

Prompted practice incorporates verbal reminders or visual supports to assist students in applying information.

Applied practice places students in a setting where content is generalized outside of the context it was introduced and previously practiced.

Distributed practice targets previously learned skills after periods of rest between practice sessions. Improves knowledge retention.

Blocked practice of pattern-based word lists featuring a specific skill or concept supports accuracy and automaticity.

Mixing/interleaving content in a random order results in more effortful retrieval. This practice improves application, generalization, and retention over time.

Lesson Template

Pacing	Component	Routine
2 min	1. PA Warm-Up	☐ Oral blending ☐ Phoneme segmentation ☐ PA identification of target sound
3 min	2. Cumulative Review	☐ Graphemes to phonemes (visual card drill) ☐ Phonemes to graphemes (auditory drill) ☐ Blending drill or syllable sort
2 min	3. Introduce New Skill	☐ I Do ☐ We Do ☐ You Do
5 min	4. Decoding Practice	☐ Pattern-based word lists for application ☐ Address the meaning of unfamiliar words
5 min	5. Spelling/Dictation	☐ Words ☐ Phrases ☐ Sentences
5 min	6. Fluency-Building	☐ Sight recognition ☐ Phrase-building ☐ Sentence-level automaticity
10 min	7. Application in Text and Comprehension	☐ Controlled/decodable text ☐ Checking for understanding

Massed practice concentrates multiple repetitions in short periods, limiting rest periods between practice sessions.

Prompted practice incorporates verbal reminders or visual supports to assist students in applying information.

Guided Practice: Supervision with immediate feedback supports learners to try out new skills in a highly-supported structure.

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Distributed practice targets previously learned skills after periods of rest between practice sessions. Improves knowledge retention.

Blocked practice of pattern-based word lists featuring a specific skill or concept supports accuracy and automaticity.

Applied practice places students in a setting where content is generalized outside of the context it was introduced and previously practiced.

Lesson Template

Pacing	Component	Routine
2 min	**PA Warm-Up** a. Oral blending b. Phoneme segmentation c. Phoneme identification or target sound	a. "I'm going to say some sounds. Please tell me the word these sounds make when you blend them." b. "I'm going to say a word. Please tell me the sounds you hear when you pull the word apart." c. "Our new sound today is /är/. If you hear the sound /är/ in the word, say the sound and give me a thumbs up."
3 min	**Cumulative Review** a. Print-to-speech connection b. Speech-to-print connection c. Blending drill or syllable sort	**Card Deck of Known Graphemes, Paper, Syllable Cards** a. Teacher displays grapheme cards. "Please tell me the sound(s) for each card." b. "I'm going to say a sound. Please repeat the sound. Then write the letters that spell that sound." c. "Let's review the three syllable types we have already learned." The teacher supports syllable sorting activity.
2 min	**Introduce New Skill** a. I Do – Provide direct instruction on the new skill	**Introduce one R-Controlled Grapheme: *ar*** a. "Today, we practiced listening for and pronouncing /är/. The sound /är/ is spelled with two letters – *ar*. When we see *ar* (for now) in a word, we pronounce it /är/."
5 min	**Decoding Practice** a. We Do – try out new skill together b. You Do –provide feedback c. Vocabulary extensions	**Wordlist Containing *-ar-* Grapheme** a. "Let's highlight *ar* and say /är/ in each word." b. "Now, I'd like you to sound out each word as you read down the list." c. Teacher addresses the meaning of unfamiliar words.
5 min	**Spelling/Dictation** a. Words b. Phrases/ Sentences	a. "I say the word, and you repeat. Please tap out and write the sounds you hear in the word." b. "I say the phrase/sentence …."
5 min	**Fluency-Building** a. Sight recognition b. Phrase-building and sentence-level automaticity	a. Teacher introduces a new irregular word and reviews previously learned irregular words. b. Teacher selects phrases or sentences from the connected text passage (in the next activity) to support fluent reading and meaning-making.
10 min	**Application in Text** a. Oral reading of a controlled, decodable passage b. Checking for understanding	a. Teacher supports fluent reading or text by front-loading essential background knowledge, addressing unfamiliar vocabulary words, etc. b. Teacher monitors reading and checks for understanding through question and answer stems that utilize choral responses.

Where Is the Practice in a Structured Literacy Lesson?

Students have multiple opportunities to engage in meaningful practice within a structured literacy lesson. A well-designed lesson will prime students for learning through opportunities to review previously learned skills systematically. Through distributed (spaced) practice, revisiting older content ensures students retain prior knowledge for application and generalization within unfamiliar contexts. Students must engage in more effortful retrieval when old content is interleaved with new content and varying procedures are intermixed. The greater the effort, the greater the gain.

When introducing new content, greater support is provided through prompted and guided practice. New content practiced using a blocked design and multiple repetitions within a short period (massed practice) enables students to acquire the skill quickly. Through blocked practice, cognitive effort is reduced, and accuracy and automaticity are increased. However, this skill must be promoted to review status in later lessons to achieve permanence.

Figure 1 shows how the design of a structured literacy lesson incorporates different forms of practice to support students toward mastery within a lesson.

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Using Assessment to Efficiently Match Students to Effective Practice

By Stephanie A. Stollar

KEY TAKEAWAYS

- Students should not practice for fluency until they perform new skills accurately.
- Assessment data can inform next steps for instruction and the most useful type of practice.
- The type of practice can be matched to phases of the instructional hierarchy.

To accomplish the goal of reading to learn, the word recognition and language comprehension skills that support reading comprehension must become automatic through sufficient practice. When to practice and what type of practice to use can be informed by assessment data that supports analysis of where students are on the learning hierarchy (Daly et al., 1996; VanDerHeyden & Burns, this issue). The likelihood of implementing effective practice improves when teachers know whether to design practice opportunities for increasing accuracy, building fluency, or promoting generalization.

Identifying the Type and Amount of Instruction and Practice

A data-based, decision-making model, such as collaborative problem-solving (CPS; Flugum & Reschly, 1994; Kovaleski et al., 1999; Telzrow et al., 2000), provides a useful framework for using assessment data to match students to instruction and practice. Figure 1 shows the steps of CPS and reflects the iterative nature of the decision-making model.

Step 1 of CPS, *problem definition*, sets the stage for Step 2, *problem analysis*, in which additional assessment data may be collected to clarify the problem. In these steps, assessment data are used to clarify the phase of the learning hierarchy so appropriate instruction and practice can be implemented. When the problem is defined in observable and measurable terms, successful instruction, including appropriate practice, is more likely.

The instructional plan implemented in Step 3 must be directly linked to the assessment data collected in Steps 1 and 2. Instruction that is matched to students' current level of performance will meet students where they are and move them forward more rapidly than instruction that is over their heads or focused on something they already know.

CPS Steps 1 & 2: Problem Definition and Analysis

Implementing effective instruction begins with a precise definition of the problem. The following questions below provide a useful place to begin:

1. Is the student responding accurately?
2. Is the student responding fluently?

At least two types of assessment can help teachers correctly identify the problem when teaching literacy: 1) informal observations and 2) timed fluency measures such as Curriculum-Based Measures (CBM; Deno, 1985; Deno, 2003; Fuchs & Fuchs, 2011; Shinn et al., 1992).

Teachers can learn a great deal through informal observations of student responses across the school day, for example,

- the number of errors made on previously taught skills,
- the time it takes to produce a response, and
- the consistency of performance across settings, materials, and content.

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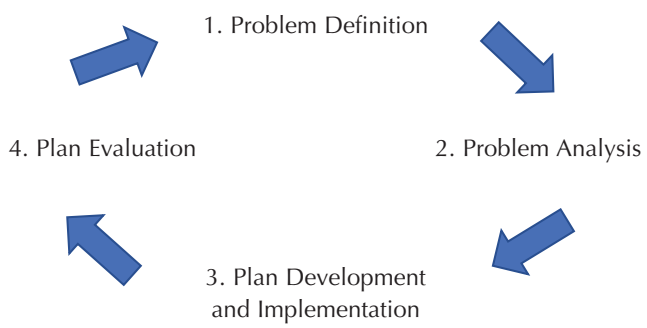
Figure 1

Steps of Collaborative Problem Solving (CPS)



Abbreviations

CBM: Curriculum-Based Measures

CPS: Collaborative Problem-Solving

The presence of errors, delayed responding, and inconsistent responding are indicators that the student is in the acquisition phase of learning.

Formal, timed assessments such as CBMs that generate a rate of accurate responding per minute are required for teachers to discriminate accurate from fluent responding.

Accurate responses are necessary but not sufficient for higher-level literacy tasks such as reading comprehension and writing. Students who read accurately but slowly are in the fluency-building phase of the learning hierarchy. Students who read both accurately and fluently are ready for generalization.

Table 1 lists samples of problem definition statements that may result from formal and informal assessments. Without correctly identifying the problem and positioning students within the appropriate phase of learning, teachers may make the mistake of encouraging students to practice errors or frustrate them by asking for generalization of knowledge before the students have mastered it.

CPS Step 3: Plan Development and Implementation: What, When, and How to Practice

Linking Assessment to Practice in the Acquisition Phase. Accurate responding is the goal of practice in the acquisition phase. When students are acquiring skills, they need instruction and practice focused on the correct production of the skill. Students who are in the acquisition phase should not practice for speed. Fluency building should be reserved for students who read with accuracy.

Teachers can support skill acquisition by

- providing the rule to apply,
- listing the steps involved,
- practicing in the same way the skill was taught,
- using scaffolds and prompts to minimize errors,
- responding to errors with immediate corrective feedback, and
- removing scaffolds and fading prompts once accurate responding occurs.

When students are struggling to acquire a new skill in the acquisition phase of learning, teachers might determine next steps by asking themselves the following questions:

1. Does the student have the necessary prerequisite skills?
2. Was the instruction aligned to research, using principles of effective structured literacy instruction?

Note: Although it may seem like a stretch, planning for generalization is useful while practicing in the acquisition phase. In other words, don't wait until the student is in the generalization phase to train for generalization. Think about and practice it in the context in which the skill will be used. As soon as a new skill is learned, apply it in context. Examples include practicing new phonics patterns in decodable text and practicing new vocabulary words in daily discussion.

Linking Assessment to Practice in the Fluency Phase. Automatic and independent responding is the goal of practice in the fluency phase. When students are accurate but slow, they need multiple repetitions and practice opportunities to move from accuracy to automaticity. Students in the fluency phase should not need any help to produce accurate responses. Because practice in this phase can be done independently or with partners, it is well-suited to use during literacy stations or centers. Students can be taught to check their independent work because they are only practicing skills that they have performed accurately.

Linking Assessment to Practice in the Generalization Phase. The goal of practice in the generalization phase of learning is to transfer skills that students can perform effortlessly and automatically to new contexts, apply them to tasks flexibly, and use them to solve complex problems. Students who are fluent are responding with ease. This is the phase in which independent work, partner work, problem-based learning, and challenge opportunities may be appropriate.

Note: A key difference between structured literacy and balanced literacy instruction is the point at which students are asked to apply or generalize skills. Child-centered, discovery-based, and constructivist approaches to instruction are

Table 1

	Sample Problem Statement	Phase of the Learning Hierarchy
1.	John makes many errors when naming letters.	Acquisition
2.	John does not respond when asked the meaning of a word.	Acquisition
3.	John is accurate at writing a complete sentence, but he has to think about it for several seconds before responding.	Fluency
4.	John is accurate at answering comprehension questions, but he needs scaffolds such as a story web or teacher prompts to produce a correct response.	Fluency
5.	John is accurate at completely segmenting phonemes in four-sound words on some days, but he does not segment initial blends on subsequent days.	Fluency
6.	John uses the irregular past tense form of verbs instantly and effortlessly.	Generalization

problematic when used with students who are not yet in the generalization phase of learning to read. Direct, teacher-led instruction that is explicit, systematic, reduces errors, and allows practice to automaticity/mastery is more effective for beginning and struggling readers when they are acquiring skills and building fluency. The proper time to ask students to work cooperatively with others to solve complex problems is in the generalization phase, not the acquisition phase. Once students have mastered foundational skills, they will be able to acquire new and complex material more easily and quickly.

Heightened awareness of accurate and fluent responding in informal and formal assessment can help teachers move fluidly to match instruction to their students' skill level and phase of learning.

Assessment data, especially data that allow teachers to discriminate accurate and fluent performance, assist teachers with matching students to practice opportunities and may avoid the misalignment of student needs and instruction that slows reading progress.

CPS Step 4: Plan Evaluation: When to Change or Discontinue Practice

Assessment data can inform decisions about changing or discontinuing practice. Once accurate responding is in place, it is time to move into fluency-building practice. When you see that a student is responding fluently, it is time to practice for generalization. Cumulative, distributed practice can be used to maintain essential skills over time. It may be necessary to drop back and provide review and practice when you see that students are not applying previously taught skills.

Heightened awareness of accurate and fluent responding in informal and formal assessment can help teachers move fluidly to match instruction to their students' skill level and phase of learning.

Table 2 illustrates the way assessment data are used in the CPS model to define and analyze the problem in Steps 1 and 2, design instruction and practice that are matched to assessment data in Step 3, and to change instruction and practice in Step 4.

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Table 2

Assessment	Results	Phase of Learning	Type of Instruction & Practice
Percent Correct	**Is the student accurate?**		
	No	Acquisition	Use prompted, repetitive, uninterrupted (massed) practice across time for accurate responding
	Yes	Move to Fluency Phase	↓
Assessment	**Results**	**Phase of Learning**	**Type of Instruction and Practice**
Rate Per Minute	**Is the student accurate?**		
	No	Go Back to Acquisition Phase	↑
	Yes	Fluency	Use guided and independent practice to build fluency
	Is the student fluent?		
	No	Fluency	Use guided and independent practice to build fluency
	Yes	Move to Generalization Phase	↓
Assessment	**Results**	**Phase of Learning**	**Type of Instruction and Practice**
Rate Per Minute	**Is the student accurate and fluent?**		
	No	Go Back to Acquisition or Fluency Phase	↑
	Yes	Generalization	Use cumulative and distributed practice for generalization

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Putting It All Together

Teachers can use observational and formal assessment data to identify student placement in the learning hierarchy. Table 3 lays out the relationship between assessment and practice.

When students don't respond, respond incorrectly, or respond inconsistently, they are in the acquisition stage and may benefit from prompted, repetitive, and uninterrupted practice over time. In contrast, students who respond correctly but slowly, are in the fluency stage and may benefit from guided and independent practice. Finally, students whose skills are accurate and automatic are ready to practice what they know in distributed and cumulative practice opportunities across tasks and materials. Determining the phase of learning and responding with appropriate instruction and practice are essential for the alignment between assessment and instruction that underlies effective reading instruction.

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Table 3

Assessment	Phase of Learning	Instructional Target	Most Effective Type of Practice	Where in the Lesson?
Percent Correct • Inaccurate responses • No response • Delayed responses • Inconsistently correct responses	Acquisition	Attain Accuracy	Prompted, repetitive, uninterrupted (massed) practice across time for accurate responding	Opening, Body I do it We do it
Rate Per Minute • Accurate responses • Slow, halting, effortful correct responses	Fluency	Build Automaticity	Guided Practice Independent Practice	Body We do it
Rate Per Minute • Accurate and automatic responses • Application of new skill in many contexts	Generalization	Application	Application Practice Distributed Practice Cumulative Practice	Closing You do it

The Role of Decodable Text in Providing Purposeful Practice Opportunities

By Andrea Setmeyer

KEY TAKEAWAYS

- Any particular text is decodable to an individual reader only if there is a strong match between the phoneme-grapheme correspondences included in the text and those the reader has learned.
- Reading decodable text is not an add-on or isolated activity, but rather can be thought of as the culmination of a continuum of practice opportunities with newly acquired decoding skills.
- Decodable text offers a rich practice environment for cultivating the habits of proficient readers, as the majority of words adhere to familiar and phonetically regular patterns, enabling decoding without reliance on picture cues or first-letter guesses.

> The first (major advantage) was that the phonics-oriented books made honest people of the teachers when they dared say, "...and if you come to a word that you don't know, sound it out." This sounds silly, but it's potentially very important. As Juel and Roper-Schneider (1985) mused, "Emphasis on a phonics method seems to make little sense if children are given initial texts to read where the words do not follow regular letter-sound generalizations." (Adams, 2008)

Educators, parents, researchers, and publishers alike are clamoring for increased use of decodable text when teaching students to read—and with good reason. Decodable texts are a valuable tool for purposefully practicing decoding skills with beginning readers of any age. They provide a powerful context for students to bridge the gap between effortfully decoding individual words and gaining meaning from connected text. This article briefly explores defining features of decodable text, the benefits of using decodable text, and describes where decodable text is situated in a continuum of practice opportunities for solidifying word recognition skills.

What Makes Text Decodable?

Decodable is a term used to describe text that consists primarily of words that students can read correctly using the phoneme-grapheme correspondences (PGCs) they have learned (Castles et al., 2018). Most of the words in decodable text follow regular phoneme-grapheme patterns, but these texts also contain a few irregular, high-frequency words (such as *the*, *have*, and *said*). The percentage of consistent phoneme-grapheme correspondences varies from text to text, and research has yet to be conducted to establish a minimum threshold of decodability necessary to generalize decoding skills (Mesmer, 2021). Nevertheless, texts designed with decodability as a defining characteristic provide students "an opportunity to practice what they have been explicitly taught in the classroom and allow them to experience success in reading independently very early in reading instruction" (Castles et al., 2018).

During phonics instruction, it is crucial to provide students with ample practice opportunities to acquire new skills, accompanied by immediate and corrective feedback. This approach ensures the development of precise and accurate connections between sounds and symbols in written language.

An important note is that even with a high percentage of decodability (or regular PGCs), a specific text is only decodable to an individual reader if there is a match between the phoneme-grapheme correspondences included in the text and those that the reader has learned. This lesson-to-text match is a

Continued on page 30

Abbreviations

PGCs: Phoneme-Grapheme Correspondences

UFLI: University of Florida Literacy Institute

Figure 1

The Snails That Tim Forgot

Note. Source: Little Learners Love Literacy, 2015. Used with permission.

critical component to consider when choosing decodable text for use with a beginning reader. For example, *The Snails That Tim Forgot* (Figure 1) provides intentional practice opportunities of the newly introduced graphemes *ai* as in *snail* and *ay* as in *day*. Every other PGC included on these pages has already been explicitly taught and practiced if one follows the scope and sequence of the Pip and Tim decodable series (Dixon & McDonald, 2015). These pages also illustrate there are many options for decodable text available today that extend beyond the very basic word patterns of older decodable text sets. Choices include nonfiction, topics relevant to older readers, as well as books with diverse characters, comedic stories, and beautiful images.

As decodable text becomes more popular, it is important to clarify a potential misconception. Currently, there is no research to suggest the exclusive use of decodable text with beginning readers. Comprehensive literacy instruction also encompasses meaningful interactions with authentic literature, fostering the development of vocabulary, grammatical structures, and a broader understanding of the world. These instructional opportunities often occur during read-alouds and scaffolded reading experiences with striving readers. Carefully selecting diverse books for various instructional purposes is of critical importance for students simultaneously acquiring word recognition skills and oral language proficiency, including Multi-Language Learners and students with Developmental Language Disorders.

Benefits of Decodable Text

Research provides at least three benefits of using decodable text with students as they acquire the alphabetic code. The first is to solidify phoneme-grapheme correspondences (PGCs) through frequent opportunities to decode them within the context of a word. "Evidence suggests that phonics teaching is more effective when children are given immediate opportunities to apply what they have learned to their reading" (Hatcher et al., 1994, cited in Castles et al., 2018). During phonics instruction, it is crucial to provide students with ample practice opportunities to acquire new skills, accompanied by immediate and corrective feedback. This approach ensures the development of precise and accurate connections between sounds and symbols in written language. Decodable text, with its deliberate selection of words containing repeated instances of specific phoneme-grapheme correspondences (PGCs), offers an efficient and effective context for the application and reinforcement of newly acquired skills.

The second benefit of using decodable text is that decoding facilitates orthographic mapping. Orthographic mapping is the cognitive process that enables students to read words by sight, but effortful decoding is the route to building this automaticity. Decoding in the context of connected text is particularly beneficial in promoting orthographic mapping as the meaning of the words are more apparent when used in sentences and stories. "Reading words in meaningful contexts ensures that syntactic

and semantic identities of words become bonded to spellings and pronunciations to form amalgamated units in memory" (Ehri, 2020). Practicing newly learned PGCs in the context of decodable text may be one way to facilitate this simultaneous activation of the spelling, pronunciation, and meaning of words that is necessary for automaticity.

Research by Juel and Roper-Schneider (1985) also provides a crucial third reason to use decodable text: that doing so promotes the habit of attending to the letters within the word as the primary means of recognizing a word, a skill used by good readers. In this study, students that read books with many decodable words used letter-sound correspondences to read words earlier and more consistently over time than students who read books with less decodability. Moreover, exposure to decodable text extends beyond correctly identifying the specific words used in the text and enables students to build a capacity for applying the alphabetic code to read new words (Juel & Roper-Schneider, 1985). Thus, decodable text offers a rich practice environment for cultivating the habits of proficient readers, as the majority of words adhere to familiar and phonetically regular patterns, enabling letter-sound decoding without reliance on other visual cues.

A Continuum of Practice

In several published research studies with significant positive effects, it is worth noting that reading decodable text is not an add-on or isolated activity, but rather is embedded within systematic, sequential, and cumulative phonics instruction (e.g., Foorman et al., 1998; Chu & Chen, 2014). Evidence-aligned instructional routines can be used to systematically ramp up the practice opportunities needed to move students from acquisition of a new phonics skill to successful generalization of the skill within new contexts. In this way, reading decodable text can be thought of as the culmination of a continuum of practice opportunities for demonstrating newly acquired code-based knowledge (see Figure 2).

What evidence-aligned instructional routines might you find in a classroom that utilizes decodable text in their continuum of practice? One example can be found in Figure 3, a lesson plan from the University of Florida Literacy Institute (UFLI) Foundations manual (Lane & Contesse, 2022). Each lesson includes a review of previously learned concepts, a singular new skill focus, and continuity between phonemic awareness, phonics, spelling, writing, and text reading activities. The accompanying materials on UFLI's website include free, printable, decodable text to accompany each lesson and a list of multiple sources for decodable text aligned to the scope and sequence used in UFLI Foundations. This sequence provides ample opportunities for students to practice a new PGC in isolation to build accuracy in the context of reading and writing real words to build fluency and then apply the learning within the context of decodable text at least every other day with opportunities to embed vocabulary and comprehension instruction.

During the acquisition phase, a new PGC is introduced (e.g., the sound /sh/ can be represented by the letters *sh*). This phase aims for students to accurately produce the target sound in isolation and then map it to the corresponding grapheme. Activities that promote acquisition include guided speech production (e.g., manner and place of articulation) of the target sound, pairing the sound with the letter(s) that represents the sound, and explicitly teaching letter formation. As students become more accurate with this sound-symbol connection, attention is turned to developing automaticity or fluency.

Fluency develops as the newly acquired PGC is repeated in visual and auditory drills and used to read and write real words. These activities help solidify the connections between the visual features of the letter(s) and the pronunciation(s). Building word chains is also included here as an effective way to build fluent decoding skills. Word chaining involves contrasting a word with a chain of words that differ by a single

Continued on page 32

Figure 2

A Continuum for Practicing Phoneme-Grapheme Correspondences (PGC)

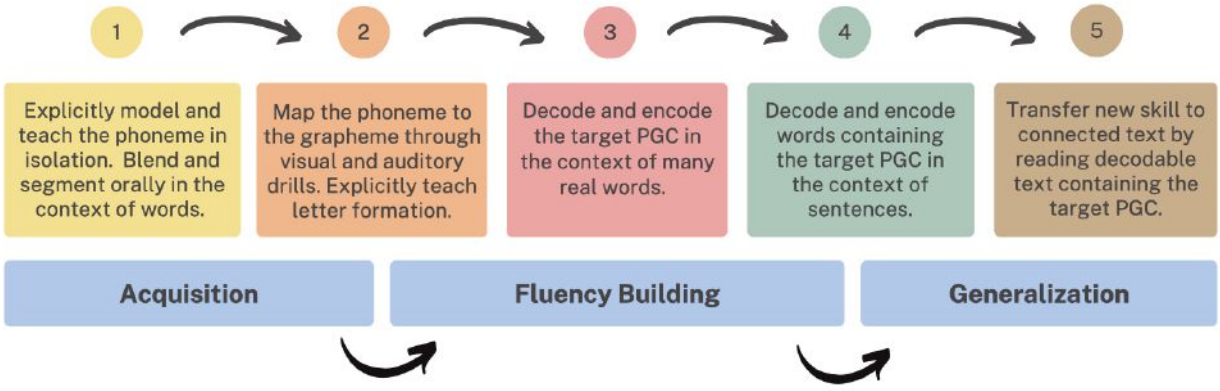
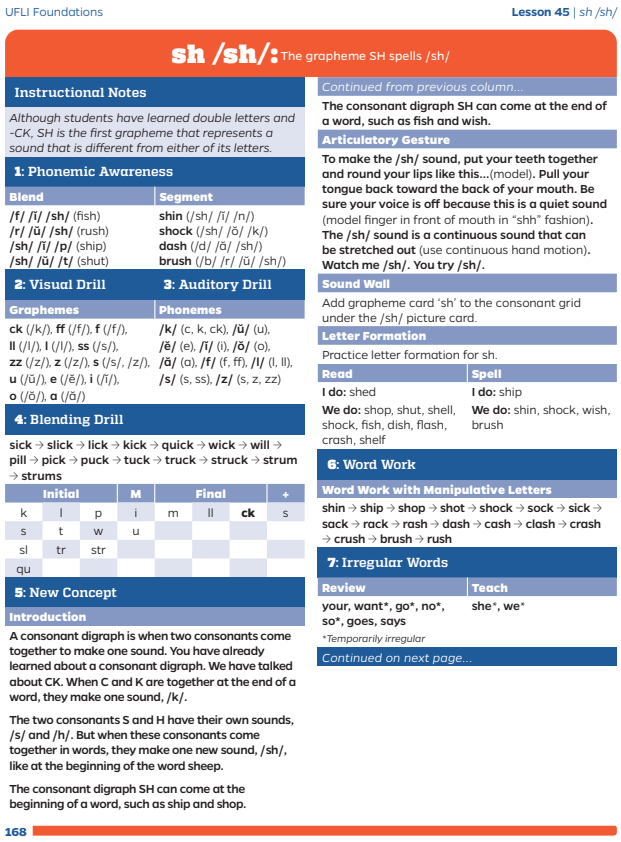


Figure 3

Lesson 45 UFLI Foundations Manual



UFLI Foundations — **Lesson 45** | *sh /sh/*

sh /sh/: The grapheme SH spells /sh/

Instructional Notes

Although students have learned double letters and -CK, SH is the first grapheme that represents a sound that is different from either of its letters.

1: Phonemic Awareness

Blend	Segment
/f/ /i/ /sh/ (fish)	**shin** (/sh/ /i/ /n/)
/r/ /ŭ/ /sh/ (rush)	**shock** (/sh/ /ŏ/ /k/)
/sh/ /i/ /p/ (ship)	**dash** (/d/ /ă/ /sh/)
/sh/ /ŭ/ /t/ (shut)	**brush** (/b/ /r/ /ŭ/ /sh/)

2: Visual Drill **3: Auditory Drill**

Graphemes	Phonemes
ck (/k/), **ff** (/f/), **f** (/f/), **ll** (/l/), **l** (/l/), **ss** (/s/), **zz** (/z/), **z** (/z/), **s** (/s/, /z/), **u** (/ŭ/), **e** (/ĕ/), **i** (/ĭ/), **o** (/ŏ/), **a** (/ă/)	**/k/** (c, k, ck), **/ŭ/** (u), **/ĕ/** (e), **/ĭ/** (i), **/ŏ/** (o), **/ă/** (a), **/f/** (f, ff), **/l/** (l, ll), **/s/** (s, ss), **/z/** (s, z, zz)

4: Blending Drill

sick → slick → lick → kick → quick → wick → will → pill → pick → puck → tuck → truck → struck → strum → strums

Initial			M	Final			+
k	l	p	i	m	ll	**ck**	s
s	t	w	u				
sl	tr	str					
qu							

5: New Concept

Introduction

A consonant digraph is when two consonants come together to make one sound. You have already learned about a consonant digraph. We have talked about CK. When C and K are together at the end of a word, they make one sound, /k/.

The two consonants S and H have their own sounds, /s/ and /h/. But when these consonants come together in words, they make one new sound, /sh/, like at the beginning of the word sheep.

The consonant digraph SH can come at the beginning of a word, such as ship and shop.

Continued from previous column...

The consonant digraph SH can come at the end of a word, such as fish and wish.

Articulatory Gesture

To make the /sh/ sound, put your teeth together and round your lips like this...(model). **Pull your tongue back toward the back of your mouth. Be sure your voice is off because this is a quiet sound** (model finger in front of mouth in "shh" fashion). **The /sh/ sound is a continuous sound that can be stretched out** (use continuous hand motion). **Watch me /sh/. You try /sh/.**

Sound Wall

Add grapheme card 'sh' to the consonant grid under the /sh/ picture card.

Letter Formation

Practice letter formation for sh.

Read	Spell
I do: shed	**I do:** ship
We do: shop, shut, shell, shock, fish, dish, flash, crash, shelf	**We do:** shin, shock, wish, brush

6: Word Work

Word Work with Manipulative Letters

shin → ship → shop → shot → shock → sock → sick → sack → rack → rash → dash → cash → clash → crash → crush → brush → rush

7: Irregular Words

Review	Teach
your, want*, go*, no*, so*, goes, says	**she*, we***

**Temporarily irregular*

Continued on next page...

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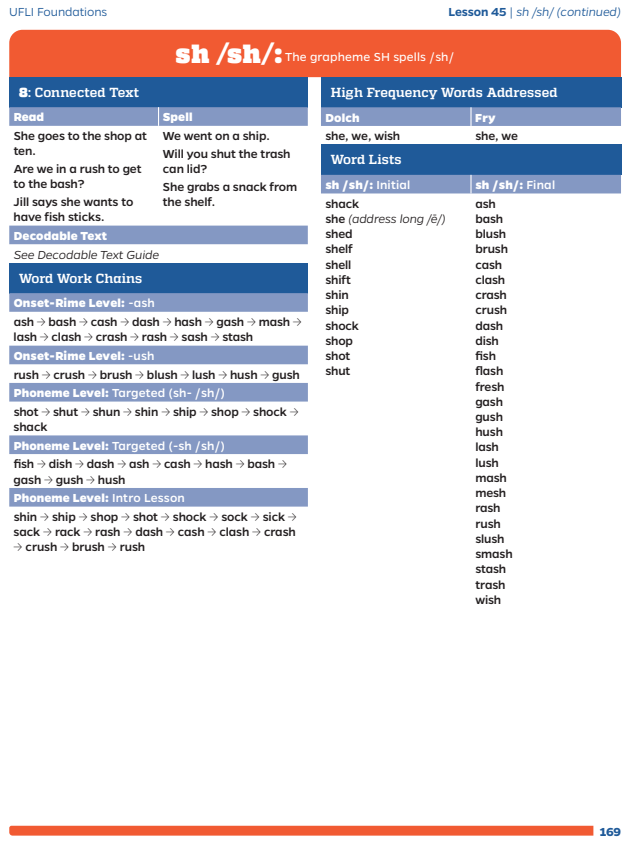

UFLI Foundations — **Lesson 45** | *sh /sh/ (continued)*

sh /sh/: The grapheme SH spells /sh/

8: Connected Text

Read	Spell
She goes to the shop at ten.	**We went on a ship.**
Are we in a rush to get to the bash?	**Will you shut the trash can lid?**
Jill says she wants to have fish sticks.	**She grabs a snack from the shelf.**

Decodable Text

See Decodable Text Guide

Word Work Chains

Onset-Rime Level: -ash

ash → bash → cash → dash → hash → gash → mash → lash → clash → crash → rash → sash → stash

Onset-Rime Level: -ush

rush → crush → brush → blush → lush → hush → gush

Phoneme Level: Targeted (sh- /sh/)

shot → shut → shun → shin → ship → shop → shock → shack

Phoneme Level: Targeted (-sh /sh/)

fish → dish → dash → ash → cash → hash → bash → gash → gush → hush

Phoneme Level: Intro Lesson

shin → ship → shop → shot → shock → sock → sick → sack → rack → rash → dash → cash → clash → crash → crush → brush → rush

High Frequency Words Addressed

Dolch	Fry
she, we, wish	she, we

Word Lists

sh /sh/: Initial	sh /sh/: Final
shack	ash
she *(address long /ē/)*	bash
shed	blush
shelf	brush
shell	cash
shift	clash
shin	crash
ship	crush
shock	dash
shop	dish
shot	fish
shut	flash
	fresh
	gash
	gush
	hush
	lash
	lush
	mash
	mesh
	rash
	rush
	slush
	smash
	stash
	trash
	wish

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Note. Lane & Contesse, 2022. Used with permission.

grapheme. In an empirical study investigating the effectiveness of word chaining (i.e., word building), McCandliss et al. (2003) stated that "integrating the content between decoding activities and text reading activities may be one way to promote transfer of decoding benefits into comprehension benefits." In this study design word chaining does not happen in isolation but rather is part of a continuum where the words that a student has just successfully built are then read aloud and discussed in meaningful contexts such as a complete (decodable) sentence.

As students become fluent with encoding and decoding the PGCs in familiar words and routines, instruction must include opportunities for generalization. This phase aims to have students practice identifying the target PGC in new words and in a variety of contexts that are as close to natural reading conditions as possible. One important note is that opportunities for students to move through acquisition, fluency-building, and generalization activities are provided within the first two days of learning a new PGC. This does not mean students master the new skill in two days. Instead, scaffolded opportunities to practice generalizing a skill within connected text can be provided before that skill is fully mastered in isolation. The lessons that follow have strategically built-in interleaved practice for each new PGC to ensure that it is mastered and retrained. Decodable text from previous weeks' lessons can be re-read individually or with partners to provide distributed practice opportunities over time to solidify word recognition skills.

Key Findings

Choosing appropriate instructional texts requires careful consideration. Decodable text is an ideal choice for purposefully practicing new decoding skills with beginning readers when integrated with other types of text in a comprehensive literacy instruction framework. The benefits of decodable text include providing multiple repetitions of a target PGC to solidify the sound-symbol connection, facilitating orthographic mapping and a sight word vocabulary, and giving opportunities to generalize newly learned skills in other contexts. Moreover, engaging with decodable text promotes the habits of skilled readers and allows for a successful reading experience during a phase of reading development where independently reading authentic children's literature is often out of reach due to the orthographic demands of the words used. Confident and capable practitioners can apply their knowledge of skilled reading development and characteristics of texts to utilize decodable text as an effective practice tool for building proficient readers.

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Watch this video panel on IDA TV
Decodable Text and Early Literacy Acquisition — *Exploring the Impact*

Decodable Text and Early Literacy Acquisition — Exploring the Impact

Anne Peiffer, *Dean of Foundational and Early Literacy,*
and **Blake Hand**, *Executive Director of Schools,*
Rockford Public Schools, IL

Robert Palazzo, *Principal,*
Panther Valley Elementary School, Nesquehoning, PA

Jasselle Cirino, *School-based Teacher Leader,*
and **Karen Josselyn**, *Literacy Coach,*
Elkin Lewis Elementary, Philadelphia, PA

Sheila Holland, *Literacy Facilitator,*
Yocum Elementary, Eldorado, AR

Holly Lane, *Associate Professor of Special Education,*
and **Valentina Contesse**, *Clinical Assistant Professor,*
University of Florida Literacy Institute

Moderated by Jill Lauren, Learning Specialist and Author, Whole Phonics

International Dyslexia Association
Perspectives on Language and Literacy, Summer 2023. Theme Editors: Nancy Chapel Eberhardt and Stephanie Stollar

KEY TAKEAWAYS

- Using decodable text provides a place for students to practice new phonics skills in a meaningful manner.
- "Quality" decodable text impacts students' motivation to read and reread, which in turn enhances literacy development.
- Small group instruction is a critical component of providing targeted instruction, and there are multiple ways to ensure that such instruction occurs each day.

The pendulum is swinging, and teachers throughout the country are reflecting on early reading instruction in new ways. Specifically, teachers are learning about research connected to beginning reading, and they are keen to implement programs that reflect evidenced-based practices. One aspect of such instruction, the use of decodable texts, is receiving increased attention. Teachers who have never used decodable text, books that explicitly provide opportunities to practice the application of sound knowledge to our written language, are doing so in large numbers. While implementing something new, teachers are often required by their districts to assess progress, and, significantly, many are noting improved reading scores and other positive impacts that demand our attention.

This session will review findings in four districts. Teachers will report their data based on the use of decodable text, as well as share other significant aspects of instruction that contribute to improved student progress. The panel will also review a research study that examined structured literacy instruction with and without decodable text, revealing how increased practice with such text enhances outcome. The evidence is clear: Decodable text plays a significant role in early reading instruction and students' acquisition of reading acquisition.

*Moderated by **Jill Lauren, MA**; Learning Specialist and Author; Veteran dyslexia specialist responsible for teaching dyslexic and struggling readers in public and private settings. Author of* That's Like Me! *and* Succeeding with LD. *Creator and Founder of Whole Phonics™, an early literacy publishing company dedicated to creating educationally sound, multiculturally diverse, and wonderfully engaging phonics-based material for beginning and struggling readers.*

Click to watch panel discussion!

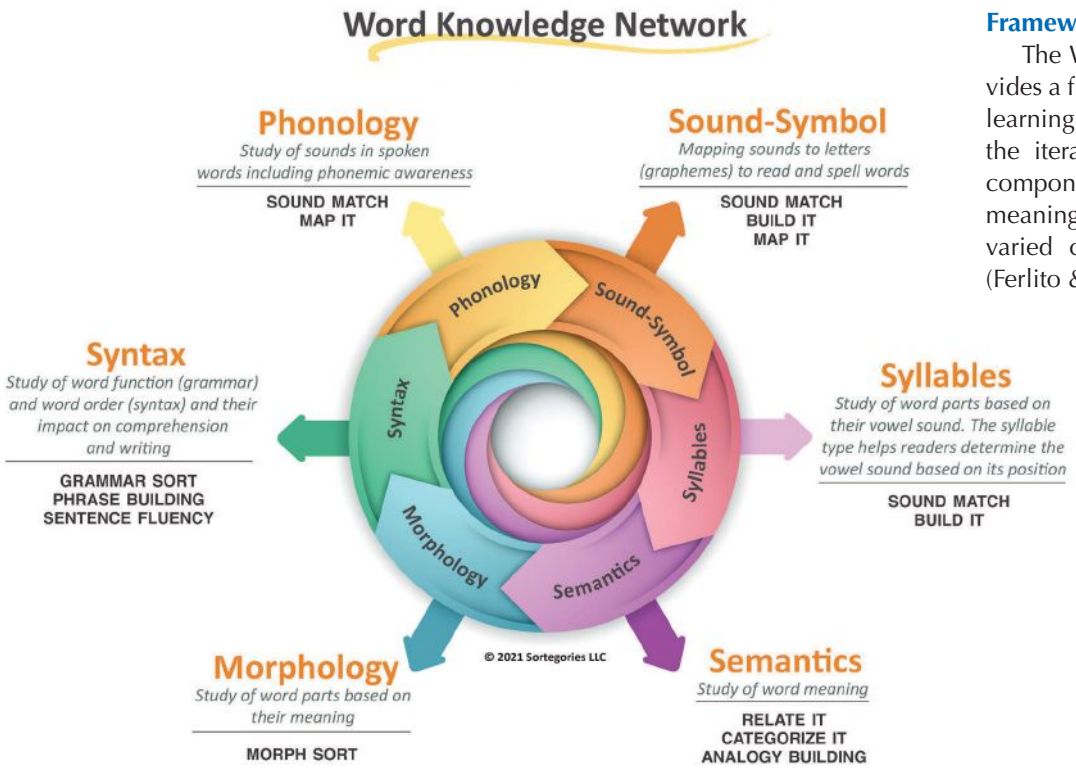
The Word Knowledge Network Helps to Close the Practice Gap from Sound to Syntax

By Sheryl Ferlito and Nancy Chapel Eberhardt

KEY TAKEAWAYS

- Deliberate practice in decoding, vocabulary, and syntax is important for students to become more fluent readers.
- The Word Knowledge Network provides a framework for the layers of word learning beyond decoding and provides a guide for meaningful practice—many trials in varied contexts distributed over time.
- The use of decodable words across varied types of tasks strengthens the word in the reading circuit with the use of interleaved or mixed practice to apply the skill in multiple contexts.

Why is practice important? "Deliberate, structured, and sustained practice" provides the opportunity for automaticity, which Vaughn and Fletcher explain is "tied to the brain reorganization that must occur in order for children to read" (Vaughn & Fletcher, 2021, p. 4–11). Practice that links together the multiple dimensions of words—their sounds, meanings, and functions—can help develop this reorganization and automaticity (Seidenberg, 2017). Additionally, practice is required across multiple phases of development (Ehri, 1995) to become a skilled reader (Strom, 2021). The more a reader learns about a word—its sound-to-spelling structure, its meaning, and how it functions in a sentence—the more fluent the reader becomes. Evidence supports a multi-component process for learning words through systematic and explicit instruction and practice (Orkin et al., 2022). Inherent in this approach is the interaction of one domain with another to build automaticity. "Automatic recognition of all five components of word knowledge results in the simultaneous and effortless retrieval of accurate pronunciations, word meanings, and parts of speech during the reading process." (Orkin et al., 2022, p. 4). The overarching goal of this process is to connect linguistic knowledge with decoding processes.



The Word Knowledge Network as a Framework to Guide Practice

The Word Knowledge Network provides a framework for the layers of word learning that are required and conveys the iterative relationship between the components. It also provides a guide for meaningful practice—many trials in varied contexts distributed over time (Ferlito & Eberhardt, 2022).

Continued on page 36

Closing the Practice Gap from Sound to Syntax *continued from page 35*

How does the Word Knowledge Network work? Let's look at each layer of information for the example word *cast*. The following table displays how the word *cast* possesses all of these layers of linguistic knowledge from sound to syntax. Each layer is an opportunity for data use, instruction, and practice.

Considering all of these layers of linguistic information about a word can inform instructional decision-making based on students' needs.

Purposeful Practice Requires Data for Guidance

Students vary in their need for practice from sound to syntax. Data can have an impact on instructional and practice decisions. Much like instruction, the collection and use of data is an interactive process. Some students may require more emphasis on code-based skills. For example, students who score low on accuracy or speed on an oral reading fluency measure will benefit from purposeful practice in decoding and

Phonology	The word *cast* is made up of four sounds. We can listen to the word *cast* and segment the word into those sounds: /k/ /a/ /s/ /t/. We can also blend the sounds /k/ /a/ /s/ /t/ to say the word: *cast*. Segmenting and blending individual sounds—called phonemes—are essential skills to spell and read. Being able to hear and feel how the sounds are formed are essential to establishing sound-to-spelling correspondences.
Sound-Symbol	Each sound in a word is represented with a letter or letter combination called graphemes. The sounds /k//a//s//t/ are spelled with the letters **c a s t**. Sometimes a sound is spelled using two letters. In /b//a//k/, the /k/ is spelled with **ck** in the word *back*. **-ck** is an example of a letter pattern rule, namely that we use **ck** when we hear /k/ at the end of a one-syllable word after a short vowel sound.
Syllables	Syllables are words or parts of words with a single vowel sound. *Cast* is a syllable with the short vowel for **a.** Each type of syllable is based on a particular type of vowel sound. *Cast* is also part of longer words like *cast*away and re*cast*. Recognizing these word parts accelerates figuring out new words.
Semantics	Words have meanings, too. In fact, many words have multiple meanings. For example, the word *cast* can mean *a stiff bandage for a broken bone*, *a group of performers in a movie*, or *to throw a fishing line*. Each meaning fits into a conceptual category—types of bandages, groups of people, or actions. Categories help us organize and remember words. Most words have synonyms, which are words that mean the same thing: One of the meanings of *cast* means almost the same as *throw*. Many words have antonyms, which are words that mean the opposite: *cast* is the opposite of *hold*.
Morphology	*Cast* is also a *morpheme*, which is a unit of meaning. The meaning of words can be changed by adding other morphemes. Some are called *inflectional endings*. They signal time (-ed) on verbs and number (-s) or possession ('s) on nouns. The meaning of the word *cast* can be changed to be *casted*, *casts*, or *cast's*. Another group of morphemes—roots, prefixes and suffixes—allow us to build and read longer words. Adding the prefix *re–* (again) to *cast* (to give a part in a movie) creates the word *recast* (to cast the part again).
Syntax	To determine the meaning of a word, we need context. Phrases, clauses, and sentences provide context. The other words and the order of the words helps us to determine meaning. For example, the sentence "His leg is in a cast" helps us determine the meaning of *cast*. Knowing the meaning of *cast*, also helps us understand that his leg is broken. Answers to questions can help the reader use context to understand the meaning of words with multiple meanings. The word *cast* can answer the question "What did it?" in the sentence "His *cast* protected his broken leg" or "Did what?" in the sentence "He cast his fishing line into the lake."

encoding activities. Important in this framework is the use of data beyond code-emphasis. Students who have difficulty with reading comprehension, in spite of scoring within the average range or above on oral reading fluency measures, may require more instruction in language-based skills, such as pronoun referents (grammar), substitutions using synonyms (semantics), and using context to determine the meaning of a word with multiple meanings (syntax). Informal and formal tools can help identify areas of need and subsequent areas for instruction and practice for all of the components.

A Scope and Sequence Facilitates Practice

When content is presented systematically, sequentially, and cumulatively, repetition automatically occurs as new elements are integrated into what students already know. Using decodable words (i.e., words based on a phonology scope and sequence) in categorization, analogy-building, and sentence-building activities, require that learners move beyond individual rote word recognition to critical thinking about the words. The use of the same decodable words across varied types of tasks strengthens the word in the reading circuit with the use of interleaved or mixed practice to apply the skill in a different context. (See Peavler in this issue for more on types of practice.)

For example, categorization can be utilized at all levels of language learning. At the decoding level, categorization can draw attention to common sounds such as the short *a* in *cast* versus the short *u* in *must*. Categorization can also develop the language of classification (e.g., animals, actions), which helps build semantic networks. The word *cast* would fit in the *actions* category given the option of *animals* versus *actions*. Analogy building requires understanding word meaning based on word relations (e.g., antonyms, synonyms), a form of conceptual thinking. Phrase or sentence building activities involve arranging words to convey meaning. Building the phrase "in a *cast*" from the sentence "Her leg was in a *cast*" clarifies which meaning is intended in this context (i.e., a stiff bandage for a broken bone). Knowledge of syntax (i.e., the way words are arranged) has an impact on meaning. Together these types of activities with decodable words provide purposeful, applied practice to build comprehension and fluency and expand practice to enhance the use of flash cards and repeated readings of text.

Learn More about the Word Knowledge Network

To learn more about this multi-component approach—what it is, how it works, and why it is integral to planning instruction and purposeful practice—watch this recorded webinar.

Meaningful practice—many trials in varied contexts distributed over time—is a key to learning. Practice is a component of the teaching and learning process essential to reach automaticity. It is the step in the instructional process designed to make learning stick.

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Sortegories Word Knowledge Network is part of Sortegories.

Partner Reading Paragraph Shrinking
An Opportunity for Practice

By Lindsay Kemeny

KEY TAKEAWAYS

- Partner Reading Paragraph Shrinking is an evidence-based, classwide intervention designed for grades 2–8.
- The activity takes 20 minutes a day for 2 weeks but can be extended throughout the year if you desire.
- This activity provides meaningful practice opportunities for students but should not replace your explicit reading instruction.

Last year I learned just how powerful it can be to provide meaningful practice opportunities for our students. I was teaching second grade and became quite alarmed when I realized that over half of my students were below the reading fluency benchmark goals at the beginning of the year. I knew I needed to have strong Tier 1 instruction in place, but what about all the students who needed more? How could I provide intervention for over half my class? Imagine my relief when I learned about a *classwide* intervention that can shrink the number of students who need Tier 2 or Tier 3 intervention. As I watched Dr. Matt Burns share his research on this topic, I was hooked. I knew this was the answer I was looking for and began the very next day to implement what I learned in my classroom. After just 2 weeks of this intervention, I was amazed to see that our class median increased from 50 words correct per minute (wcpm) to 64 wcpm! I decided to continue the intervention throughout the school year. At the middle of the year (MOY), our class median was 90 wcpm (MOY Benchmark is 72 wcpm) and by the end of the year (EOY), our class median was 118 wcpm (EOY Benchmark is 87). So, while at the beginning of the year over half of my class was below benchmark, at the end of the year, well over half of my class was above benchmark. Would you like to try it out in your classroom? Here's what you need to know.

	Class Median Beginning of Year Benchmark 52	Class Median Middle of Year Benchmark 72	Class Median End of Year Benchmark 87
Final Scores: Class Median	50	90	118

This intervention is called Partner Reading Paragraph Shrinking and it is designed for grades 2–8. It is an evidence-based activity (Burns et al., 2015) modified from the Peer Assisted Learning Strategies (PALS; Fuchs et al., 2001) program with immediate positive effects. It only takes 20 minutes a day for two weeks, although you can continue throughout the year if you desire.

Partnerships

First, create your reader partnerships. You will need a stronger and weaker reader in each pair. To do this, list the students in your class from most to least fluent. Then, split the list in half. Assign the most fluent reader from one half of the list with the most fluent reader in the second half of the list and the second most fluent in one half of the list with the second most fluent in the other list, and so on. You would never want to pair the most fluent reader with the least fluent reader because it would frustrate them both. Identify the readers in the pair as Reader 1 (the stronger reader) and Reader 2 (the weaker reader).

If you have an odd number of students, you can have one of your most fluent readers be a floater who is paired with any other student whose regular partner is absent. Another option is to create a triad. One of your least fluent readers can be placed with another reader and they can both be Reader 2. Then the stronger reader in the trio can be Reader 1. When it is Reader 2's turn to read, both students can read together, providing additional support for the weaker student.

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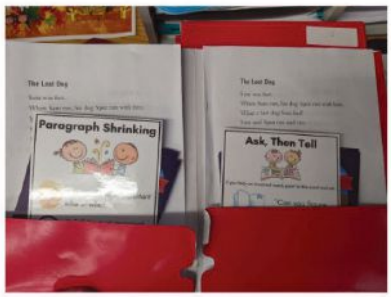
Abbreviation

PALS: Peer Assisted Learning Strategies
WCPM: Words Correct Per Minute

Set Up

Each pair is given a folder with the procedures, passages on the weaker reader's instructional level, error correction handout, and paragraph shrinking instructions. I use https://www.readworks.org/ for passages. This is a free website you can use to create text sets on the same topic. This approach helps students build content knowledge and vocabulary, and provides a scaffolded approach to introducing more complex texts. For students who are unable to read at a 2nd grade level, I use a variety of decodable texts and then transition them into Readworks passages when they are ready.



Set Up

***Folder for each pair includes: error correction procedure, Paragraph Shrinking directions, rules, and passages.**

***Practice set up procedures.**

The Procedure

Students complete this activity by following these four steps:

1. Reader 1 reads aloud for 5 minutes, while Reader 2 follows along.
2. Reader 2 reads aloud the same text for 5 minutes, while Reader 1 follows along.
3. Reader 1 continues reading for 5 minutes where Reader 2 left off, pausing to summarize ("Paragraph Shrink") after every paragraph.
4. Reader 2 continues reading for 5 minutes where Reader 1 left off, stopping to summarize ("Paragraph Shrink") after every paragraph.

*If time is a concern, you can opt to do each step for 4 minutes instead of 5, making the whole intervention just 16 minutes.

Paragraph Shrinking

Paragraph shrinking is a strategy that allows the students to summarize the main points of each paragraph. After reading a paragraph, the student is asked to do the following:

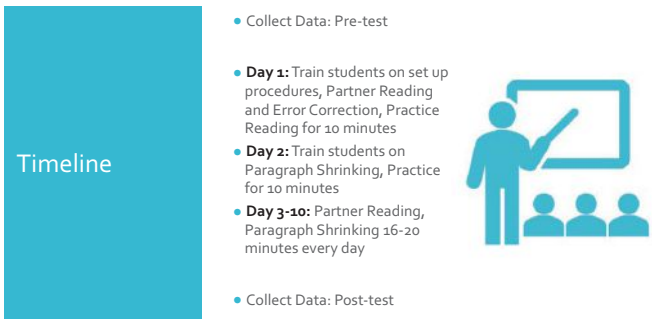
- Name the most important who or what
- Say the most important thing about the who or what
- Say the main idea in 10 words or less

Please note that Paragraph Shrinking takes a lot of modeling and practice. Be prepared to spend several days working on this procedure. Students will benefit from continuous monitoring, support, and feedback as they engage in this activity. See a video of my students practicing the Paragraph Shrinking procedure here.

Error Correction

Make sure to teach students what to do when their partner struggles with a word. Students should learn to be a good coach to their partner who is reading. I use an error correction procedure shared by Archer & Hughes (2010) called Ask, Then Tell. When partners hear an incorrect word, they point to the word and ask, "Can you figure out this word?" They wait four seconds and if the reader hasn't responded, they say, "This word is _____. What word?" The reader says the word. Then the partner says, "Now reread the sentence." See the video I created to teach my students this procedure here.

Implementation Timeline



Day 1

1. Explain the expectations for partner reading.
2. Share the set-up routine. Decide how students will pick up their folders and where each pair will work. Then allow students to practice until they can do it quickly and quietly.
3. Teach the error correction procedure.
4. Have students practice the first half of the Partner Reading Paragraph Shrinking routine. Students will read the same passage aloud for 5 minutes each, for a total of 10 minutes. While students are reading, make sure to circulate around the room and give feedback as needed.
   a. Reader 1 will read for 5 minutes while Reader 2 follows along.
   b. Reader 2 will go back to the beginning of the same passage and read for 5 minutes while Reader 1 follows along.

Day 2

1. Review the partner reading expectations.
2. Allow time for students to practice the set-up routine.
3. Introduce Paragraph Shrinking.
4. Have students practice the second half of the Partner Reading Paragraph Shrinking routine. Students will each read aloud for 5 minutes, pausing to Paragraph Shrink after each paragraph.

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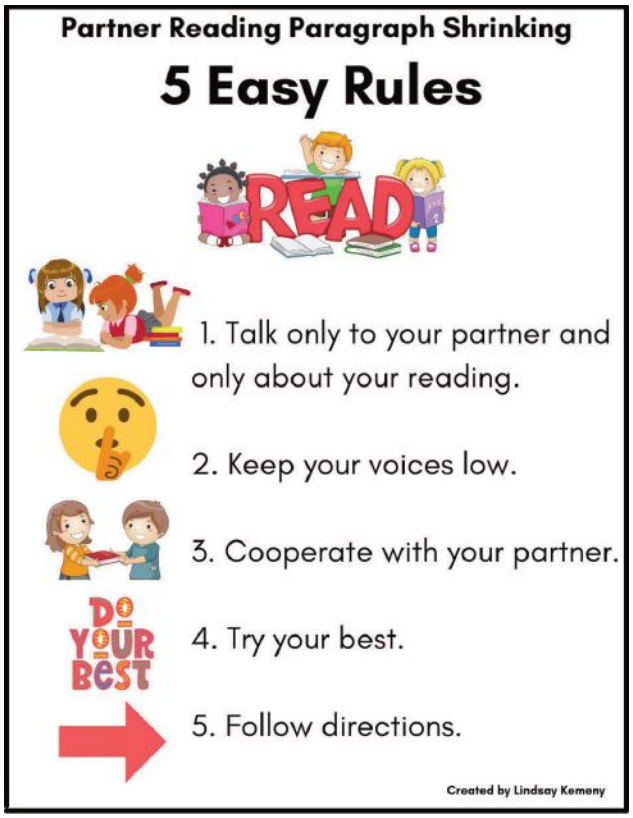

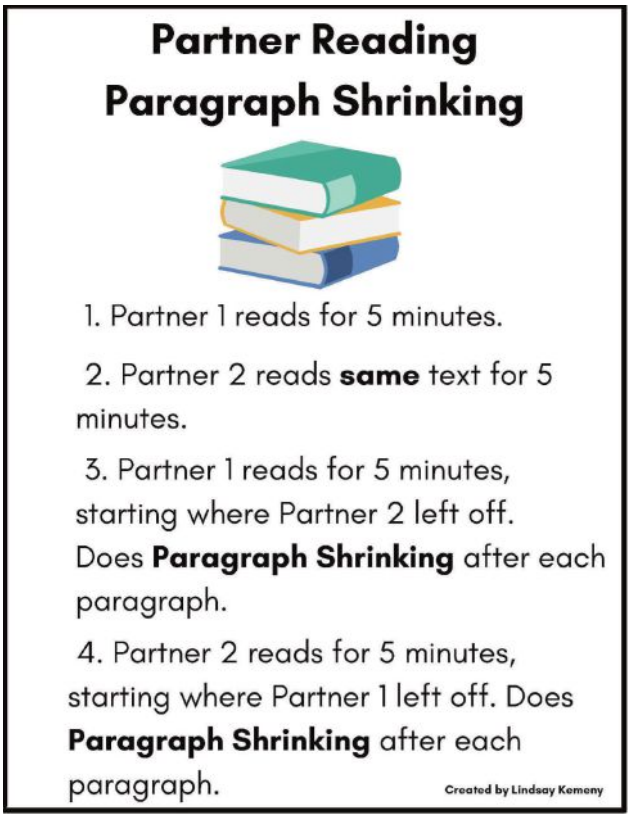

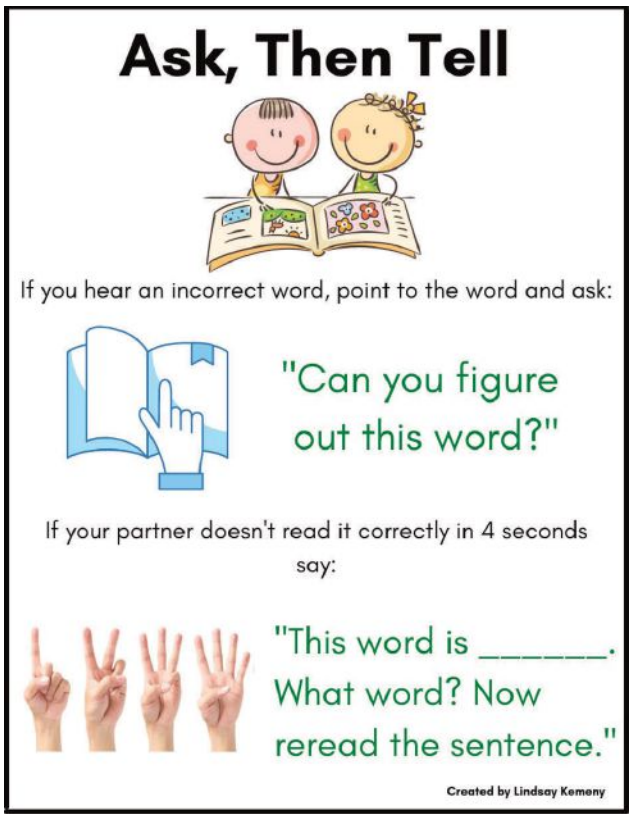

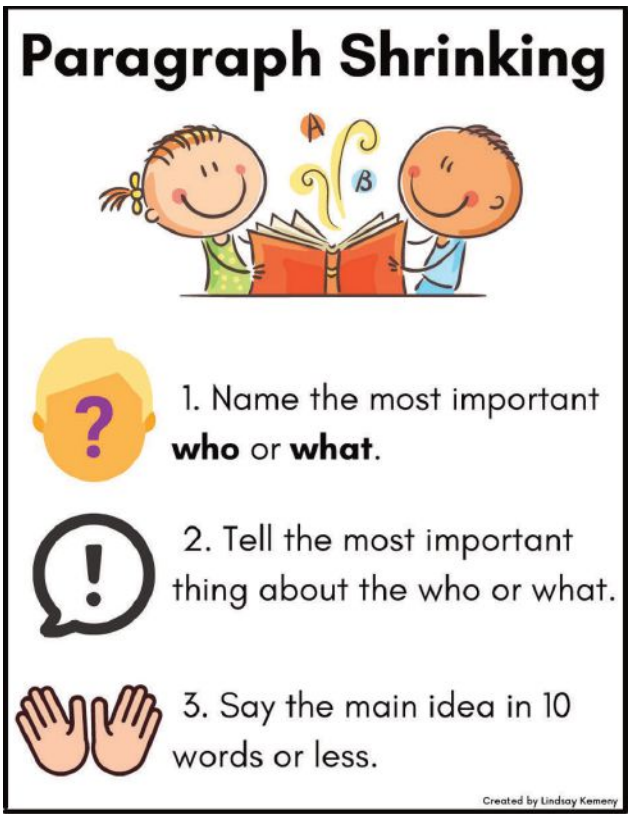

Note. Used with permission from Lindsay Kemeny.

a. Reader 1 will read for 5 minutes, pausing to Paragraph Shrink after each paragraph.

b. Reader 2 will continue reading for 5 minutes where Reader 1 left off, pausing to Paragraph Shrink after each paragraph.

Days 3–10

1. Continue with all four steps of the intervention for days 2–10.

Important Clarification

Partner Reading Paragraph Shrinking can be an effective intervention in your classroom, but it does not replace your explicit reading instruction. It is simply an opportunity for students to apply what they are learning in your explicit and systematic lessons. It does not replace any of your whole group instruction. Additionally, this is not a Tier 2 or 3 intervention. Some students will need more targeted, intense instruction. However, this classwide intervention should improve the reading proficiency of many of your students and subsequently decrease the amount of students who need Tier 2/3 intervention. This approach is designed to help you meet the needs of all the readers in your class.

For more information on Partner Reading Paragraph Shrinking, please view my presentation here.

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More Time for Practice
Integrating Literacy Across Content Subjects

By Nancy Chapel Eberhardt and Margie Gillis

KEY TAKEAWAYS

- Students' word reading skills, vocabulary, and syntactic knowledge improve with guided and independent practice throughout the school day.
- All content area teachers should utilize instructional routines that include consistent academic language and terminology for students to practice literacy skills.
- Professional development must include content area teachers to ensure that they have the requisite background knowledge to embed the routines in their classroom instruction.

If practice makes perfect, then finding more time to practice should be a goal for teachers responsible for developing their students' literacy proficiency. The challenge is how can teachers find more time for practice. Perhaps part of the solution is looking beyond the English Language Arts (ELA) instructional block. In fact, there are multiple reasons that infusing literacy practice in content subjects throughout the day is desirable. A meta-analysis conducted by Hwang and colleagues (2022) provided evidence and confirmed the importance of integrating literacy and content-area instruction in the elementary grades. The focus of their article is how this integration builds vocabulary and comprehension knowledge. Their findings pave the way for what Shanahan refers to as *disciplinary literacy*, because explicitly teaching literacy skills in content subjects helps ensure that students understand how to read and write in each discipline, for example, science and math (Shanahan, 2022). This article explores the benefits of intentional integration of literacy skills and illustrates ways of weaving literacy instruction (or practice) into content subjects.

Make It Multi-componential

Evidence supports a multi-component process for teaching students to read (Orkin et al., 2022). In addition to learning the speech-to-print processes (phoneme awareness (PA) and phonics), developing readers' access to word meanings (vocabulary) and how they function in a sentence (syntax) are also integral for reading fluency and comprehension. These three components are represented by the vertical bands on the infographic (Figure 1). The infographic depicts the idea that the primary focus of ELA instruction (the first horizontal band) is on developing these separate but interrelated concepts and skills. It is imperative that the code is taught systematically and explicitly during ELA based on evidence-based practices. However, these same components apply to the words used in content subjects, hence the horizontal bands representing several key content subjects (e.g., social studies, math, science).

It is imperative that the code is taught systematically and explicitly during ELA based on evidence-based practices.

Establish Transferable Instructional Routines

While foundational literacy skills are being taught systematically and explicitly during ELA, instructional routines, such as Divide It, Define It, Sentence Building, and Action: Tell Me More (see Figures 2–5) can—and should—be applied in content subjects. By so doing, students get more practice with these essential literacy skills and, using these routines in content subjects also ensures that students learn to read, spell, and write using that discipline's language. Applying the same routines (procedures) across subject areas has the added benefit of providing consistency from the students' perspective; all teachers use the same academic language and terminology avoiding confusion for the student.

The nature of the routines with the various literacy components changes across the grades. For example, the focus of PA and Phonics in the primary grades could be to identify the initial sound in content vocabulary. By upper grades, the unit of focus could change to syllable or morpheme-level elements. A routine designed to help students define a word is applicable across the grades. To learn new vocabulary, presenting each

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Abbreviations

ELA: English Language Arts

PA: Phoneme Awareness

Figure 1

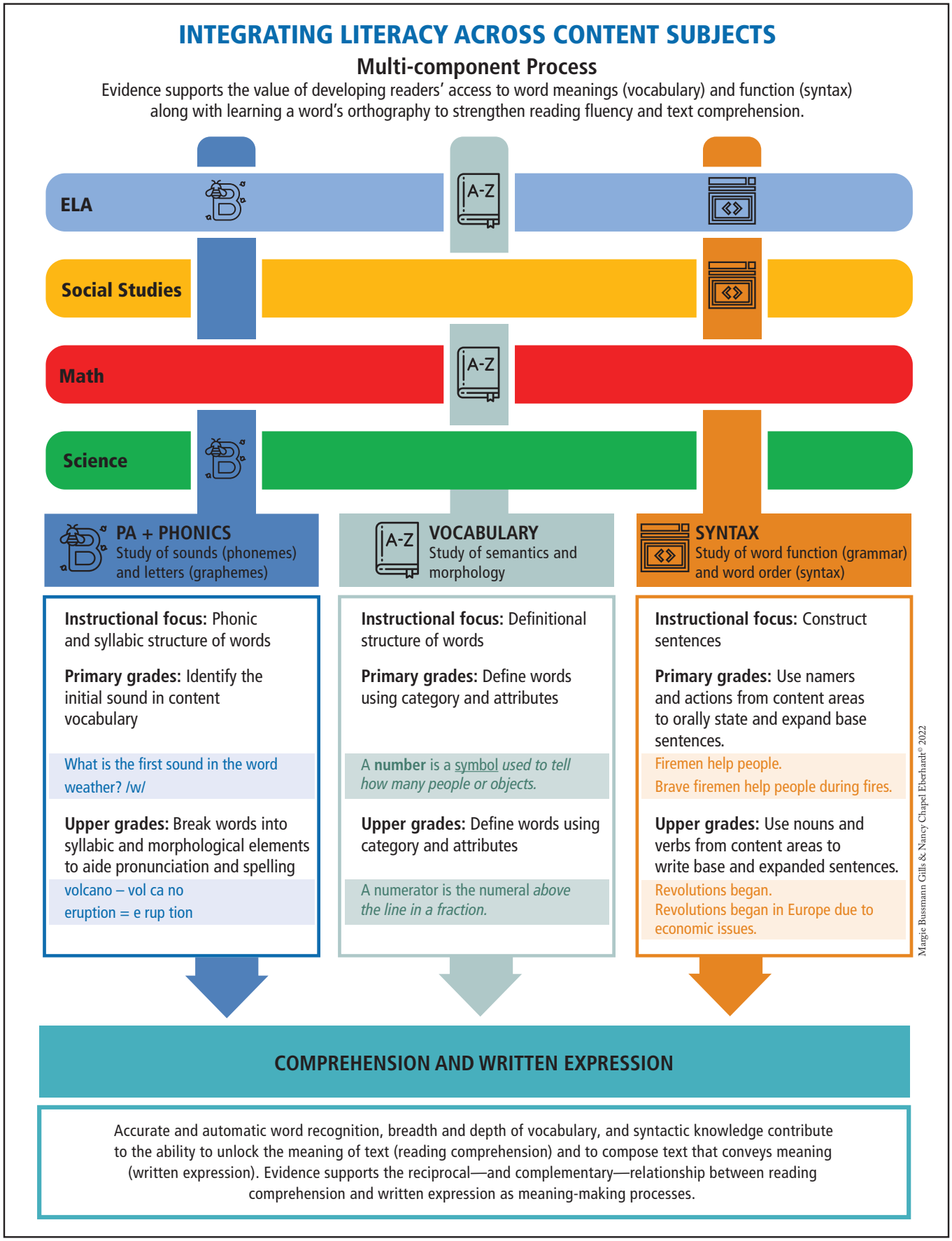

INTEGRATING LITERACY ACROSS CONTENT SUBJECTS
Multi-component Process
Evidence supports the value of developing readers' access to word meanings (vocabulary) and function (syntax) along with learning a word's orthography to strengthen reading fluency and text comprehension.
ELA
Social Studies
Math
Science
PA + PHONICS
Study of sounds (phonemes) and letters (graphemes)
VOCABULARY
Study of semantics and morphology
SYNTAX
Study of word function (grammar) and word order (syntax)
Instructional focus: Phonic and syllabic structure of words
Primary grades: Identify the initial sound in content vocabulary
What is the first sound in the word weather? /w/
Upper grades: Break words into syllabic and morphological elements to aide pronunciation and spelling
volcano – vol ca no
eruption = e rup tion
Instructional focus: Definitional structure of words
Primary grades: Define words using category and attributes
A number is a symbol used to tell how many people or objects.
Upper grades: Define words using category and attributes
A numerator is the numeral above the line in a fraction.
Instructional focus: Construct sentences
Primary grades: Use namers and actions from content areas to orally state and expand base sentences.
Firemen help people.
Brave firemen help people during fires.
Upper grades: Use nouns and verbs from content areas to write base and expanded sentences.
Revolutions began.
Revolutions began in Europe due to economic issues.
Margie Bussmann Gills & Nancy Chapel Eberhardt© 2022
COMPREHENSION AND WRITTEN EXPRESSION
Accurate and automatic word recognition, breadth and depth of vocabulary, and syntactic knowledge contribute to the ability to unlock the meaning of text (reading comprehension) and to compose text that conveys meaning (written expression). Evidence supports the reciprocal—and complementary—relationship between reading comprehension and written expression as meaning-making processes.

Figure 2

Divide It

Step	How to do it	Example
1	Check word for known prefixes and suffixes. Circle them.	disruption
2	Mark each vowel with a dot.	
3	Scoop the parts from left to right based on syllable patterns.	
4	Say (blend) the parts from left to right.	
5	Flex pronunciation (syllable stress) to sound like a known word.	

Note. Used with permission from Voyager Sopris Learning. Adapted from LANGUAGE! The Comprehensive Literacy Curriculum, 4 edition and PaTTAN Literacy "Reading Big Words Instructional Routine." Reading Big Words: https://www.youtube.com/watch?v=7D-pKMT9WLY&t=194s

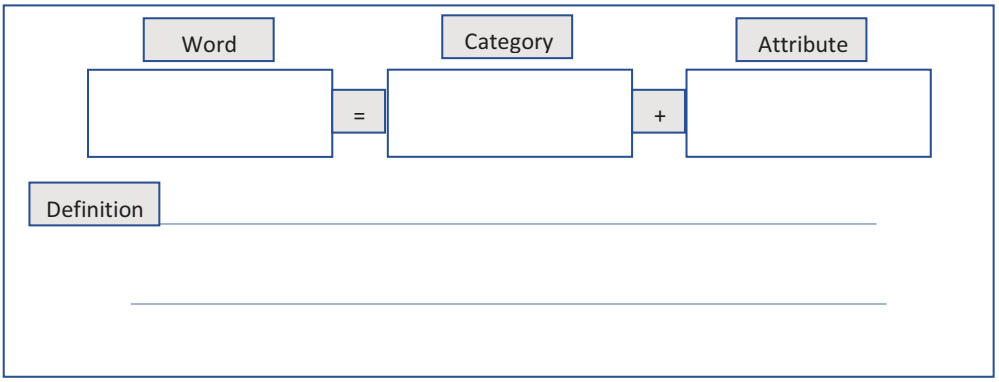
Prerequisite knowledge: pronunciation of vowel in syllable types/patterns and impact of schwa, common affixes, and accent patterns

Figure 3

Define It

Use the word definition template to organize the components of the word's meaning. For steps two and three, provide the category and attributes depending on the prior knowledge of the students.

1. Provide target word to define. Have students write it in the first box.
2. Identify category for the word. Have students write the category in the second box.
3. Identify attributes that differentiate the target word from others in the category.
4. Combine the information about the word into a definition. Write it in the designated space.



A sentence frame can serve as an alternative support for generating a definition.

An (word) is a _____ that _____.
Category Attribute(s)

Example: A **numerator (word) is part of a fraction (category) that is the top number (attribute).**

Note. Used with permission from Voyager Sopris Learning. Adapted from *LANGUAGE! The Comprehensive Literacy Curriculum, 4*rd edition.

Figure 4

Sentence Building: Sentence Building (Stage 1)

Objective: To generate complete sentences (i.e., S + P; S + P + O) and identify sentence parts (i.e., subject, predicate, and object)

Target students: 1

Materials needed: Pocket chart to display words; word cards to label columns on the pocket chart: Noun (namer), Verb (action); word cards to label parts of the sentence: Subject, Predicate, Object; a set of decodable word cards that are nouns and a set that are verbs[1]—have approximately the same number of words for each category and combinations that make sense when combined to form a sentence.

How to do the activity:

Introductory lesson[2]

1. Review with students that some words are called **namers**, because they name something—either a person, a place or a thing. We can also call these words **nouns**. Place the "Noun" card in the top row of the pocket chart. Other words are called **actions** because they tell us what someone or something can do. Actions are also called **verbs**. Place the "Verb" card next to the "Noun" card in the top row of the pocket chart.

Note. Excerpt from Gillis, M. B., & Eberhardt, N. C. (2018). *Syntax: Knowledge to Practice*, 35–40. Download the complete Sentence Building instruction routine at https://app.box.com/s/4zfyrehsyca3gtdflzgwnm5tao0cbw2l

Figure 5

Action: Tell Me More – Working with Phrases (Stages 1 and 2)

Objective: To identify the kind of information—when, where, and how—used in a verb phrase

Target students: K – 2

Materials needed: Pocket chart to display phrases; highlighter pens; index cards with the action expansion questions—**When? Where?** and **How?**; sets of phrases for practice; sets of phrases[1,2] to introduce the three ways to expand actions:

- **When** (i.e., have words or phrases that convey time in the phrase, such as **camped** *last night*, **baked** a cake *yesterday*, **cheered** *after winning*)
- **Where** (i.e., have words or phrases that convey location in the phrase, such as **camped** *in a tent*, **baked** *in the oven*, **cheered** *at the game*)
- **How** (i.e., have words or phrases that convey how something is done or is happening, such as **camped** *happily*, **baked** *with a friend*, **cheered** *excitedly*)

Note. Excerpt from Gillis, M. B., & Eberhardt, N. C. (2018). *Syntax: Knowledge to Practice*, 55–57. Download the complete Action: Tell Me More instruction routine at https://app.box.com/s/vk79rtzzrpdc7v9q2gc96zwfkd0g7dzb

target vocabulary words with its category and distinguishing attributes can help students organize their language to define words. Similarly, a sentence expansion routine encourages students to first focus on the namers (nouns) and actions (verbs) of the subject matter so they can write sentences based on the content (Hochman & Wexler, 2017, Greene & Enfield, 2010). Elaboration of the base sentences is based on listening to or reading content subject material. Each of these routines can be utilized with subject content as illustrated by the examples on the infographic.

Implications for Professional Development

To accomplish this goal of integrating literacy practice across content subjects, it is essential to make a commitment to include subject area teachers in professional development that prepares them to view their discipline through a literacy lens. This preparation can begin by identifying procedures, such as breaking big words into chunks, that are part of the reading curriculum used in the district. Alternately, teachers can use routines from other sources that target needed skills. (See Kastner article in this issue.) Professional learning opportunities that equip teachers with practical instructional routines, like the ones mentioned earlier, can promote changes in instructional behaviors and increase the likelihood of changes in learning outcomes for students across the grades. Utilizing common literacy skill routines across subject areas increases the practice required to learn and use essential skills for literacy proficiency.

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Dr. Margie B. Gillis, Ed.D., CALT*, is the founder and president of Literacy How, Inc., a non-profit organization that provides professional learning opportunities and coaching for educators on how best to implement evidence-based practices in the classroom. She has worked at the policy level through the Connecticut State Department of Education and has partnered with educators in other states to bring the research on reading and* Structured Literacy *into districts, schools and importantly, classrooms across all tiers of instruction. She is an advisor for ReadWorks, Understood, and the International Foundation for Effective Reading Instruction and is on the Editorial Board of IDA,* Perspectives *and* The Reading League Journal. *Margie believes that learning to read is a civil right and that* ***all*** *children can learn to read and benefit from evidence-based instruction.*

The Power of Practice
Instructional Routines to Maximize Student Learning

By Pam Kastner

KEY TAKEAWAYS

- **Practice is essential to learning because it helps to consolidate and strengthen memory for the knowledge and skills being learned.**
- **Instructional routines are structured teacher behaviors and procedures used consistently in the classroom to support and enhance student learning.**
- **Instructional routines are a powerful vehicle for practice that benefit teachers and students alike.**

Mr. Rodriguez is an elementary-level teacher who wants to provide more practice in the content and concepts he has taught his class, but there never seems to be enough time in the day. He wonders what practices he could add to his instruction that would allow him to maximize instructional time and student learning.

Mrs. Harris is a high school science teacher. She has noticed her students have difficulty with domain-specific, multisyllabic vocabulary words embedded within the content of her class. She is wondering how to instruct more effectively to ensure her students master the critical vocabulary essential to learning the content in her class.

The students of both Mrs. Harris and Mr. Rodriguez would benefit from intentional practice opportunities and instructional routines aligned with their learning goals. But what are instructional routines?

The Power of Practice to Maximize Learning

Think of any complex skill you can do accurately and automatically. That skill may seem as though it is carried out unconsciously. For example, have you ever driven somewhere and realized upon your arrival that you have no memory of the drive itself?

At an earlier point in your life, you were conscious of every subskill needed to safely drive, from the gas pedal to the steering wheel, the brake pedal, and more. How did you arrive at this level of unconscious skill for such a complex skill? Practice. Consistent, ongoing practice with feedback and, when necessary, specific error correction, led you to this level of accuracy and automaticity.

Practice is essential to learning because it helps to consolidate and strengthen memory for the knowledge and skills being learned.

Practice is essential to learning because it helps to consolidate and strengthen memory for the knowledge and skills being learned. Repeated practice distributed over many sessions results in far superior learning than massed practice. We likely all have the experience of "cramming" for a test, creating an illusion of mastery and fluency. We may feel like we have learned the content, but this feeling can be misleading.

Information is better retained and learned when it is presented over spaced intervals of time rather than concentrated. Distributed practice challenges our memory retrieval process, making it more effortful to recall information. This effortful retrieval over spaced intervals strengthens the memory traces and improves long-term retention, freeing up cognitive resources for more complex and challenging tasks.

Moreover, retrieval practice, which is the act of recalling information from memory, and interleaved practice, which alternates between different topics or skills during practice, enhances memory consolidation and promotes deeper understanding and transfer of learning to new contexts.

How can educators maximize the power of practice to enhance student learning? Instructional routines.

Instructional Routines

Instructional routines are structured teacher behaviors and procedures used consistently in the classroom to support and enhance student learning. Instructional routines offer a sense of predictability and stability for teachers and students alike because they can be "used again and again in presenting

Continued on page 50

Abbreviation

MTSS: Multi-Tiered System of Supports

new information or providing practice on information" (Archer & Hughes, 2011, p. 195).

Instructional routines can be used to introduce new material, provide practice opportunities for a new learning or skill, to provide distributed and cumulative review of previous learning, to facilitate peer learning, or assess learning outcomes.

In short, instructional routines embed the power of intentional practice aligned to learning goals to facilitate movement through the stages of learning: acquisition, fluency, generalization, and adaptation.

Instructional Routines: WHAT

Types and Attributes of Instructional Routines

Teachers can use many types of instructional routines, depending on the content and concepts under study and the needs of students. Nevertheless, at their foundation, effective instructional routines align with the principles of explicit instruction:

1. **Explicit Instruction (I do):** Direct, unambiguous, explicit, and systematic instruction with clear teacher explanation, modeling/demonstration, and a range of examples and non-examples.
2. **Guided Practice (We do):** Following direct instruction, the teacher provides opportunities for practice with scaffolded and guided support in applying newly learned content/concepts, monitoring student learning, and providing ongoing affirmative and/or corrective feedback.
3. **Independent Practice (You do):** Independent practice of newly learned content/concepts to facilitate mastery, transfer, and/or generalization of taught content/concepts. (Archer & Hughes, 2011)

Instructional routines benefit all students; however, they are particularly beneficial for students with learning difficulties, as they provide the structure and predictability necessary to facilitate student focus on the content/concepts under study and, notably, the practice crucial for mastery, generalization, and transfer. As Willingham (2004) wisely advises, "It is difficult to overstate the value of practice. For a new skill to become automatic or for new knowledge to become long-lasting, sustained practice, beyond the point of mastery is necessary."

While the importance of an I Do-We Do-You Do structure cannot be overstated, it is important to note the extent of modeling (I do), scaffolded and guided practice (We do), and independent practice (I do) will likely vary across students as part of a Multi-Tiered System of Supports (MTSS).

Opportunities for practice across the tiers may resemble more of the following model, which intensifies instruction by providing more scaffolding and practice opportunities as we move across the tiers of instruction.

Instructional Routines: WHY

Instructional routines are effective for a number of reasons:

1. **Predictability**: Instructional routines provide a predictable and consistent structure for student learning. Freeing up working memory and cognitive desk space for students to focus on the learning at hand.
2. **Efficiency**: Instructional routines allow teachers to use time more efficiently. The consistent structure and procedures maximize time on task and can be flexibly applied to previously learned content/concepts or to introduce new learning in a consistent and systematic manner.

What Is Different Across the Tiers?

Tier I	*Tier II*	*Tier III*
I do	I do	I do
	I do	I do
We do		I do
We do	We do (with teacher)	We do (with teacher)
We do	We do (with teacher)	We do (with teacher)
	We do (with teacher)	We do (with teacher)
You do	We do (student pairs)	We do (with teacher)
	We do (student pairs)	We do (with teacher)
		We do (student pairs)
	You do (with peer feedback)	We do (student pairs)
	You do (with peer)	We do (student pairs)
	You do	We do
		We do
		We do
		You do (with teacher feedback)
		You do (with teacher feedback)

Note. Used with permission from Jess Surles: Reading Instruction and Supplemental Interventions to Support Equitable Literacy.

3. **Peer Practice**: As students engage in predictable instructional routines over time, after direct instruction and modeling by the teacher, student pairs can engage in structured interactions with instructional routines acting as coach and student, then reversing roles. Thus, providing additional opportunities for practice and learning.

Instructional Routines: HOW to Begin

1. **Identify your goals:** Start by identifying the instructional goal(s) for the instructional routine. Understanding your goal will help you select the right instructional routine aligned with your learning goals.
2. **Select an aligned instructional routine:** Is the goal of the instructional routine direct instruction of a new content/concepts? Practice of previously learned content/concepts? Both? Be certain the instructional routine selected aligns with the instructional goal(s).
3. **Start small and practice, practice, practice**: Start with just one instructional routine where you seek proficiency. Model and conduct this instructional routine with a peer. Seek specific feedback as to your performance from your peer. Correct errors. Practice! Practice! Practice until you are accurate and fluent with the routine.
4. **Introduce the instructional routine procedures and the instructional routine to your students:** Introduce and model the routine for your students. This will involve direct and explicit instruction in the procedures for how to engage with the instructional routine for your students (e.g., focus, cue, think time, signal). Practice and reinforce the routine. You may want to reinforce the routine with visual aids, such as posters, charts, or graphics. Place these visual aids where students can easily see them to remind students of the steps involved in the routine. When you and your students become proficient with the procedures and the instructional goal is met for this first instructional routine, then choose the next instructional routine and repeat the process.
5. **Evaluate and adjust:** To ensure consistency and fidelity of the instructional routines implemented, regularly evaluate your practice, and make necessary adjustments as needed. This process could include video recording your practice and/or inviting a peer to provide implementation feedback using a fidelity checklist aligned with the instructional routine.

Practice Benefits Teachers and Students

In summary, practice is a key component of effective learning because it promotes retention, fluency, and deeper understanding of the content, concepts, and processes being studied. Instructional routines are a powerful vehicle for practice that benefit teachers and students alike.

For more information on instructional routines, see Pam Kastner's Instructional Routine Wakelet

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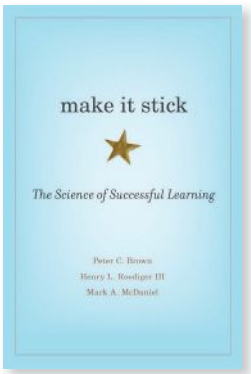
Book Review by Kelly Butler



Make It Stick: The Science of Successful Learning

Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel

Harvard University Press

336 pages. 2012. Hardcover.

In my hundreds of observations of how we teach teachers to teach reading, I have long opined that there is very little focus on how the *learning* process actually works. Most educator preparation programs jump into the deep end with "methods courses," rarely pausing to consider how students (both K–12 and their pre-service candidates) receive, process, and remember new information. As the authors of *Make It Stick: The Science of Successful Learning* make clear, this is not about learning styles (Bowers, Roediger, McDaniel, 2014). This is about the science of learning and, by extension, the science of memory. Understanding this science is leading researchers to conclude that some of the most frequently used methods, in fact, are not as effective as we thought. And, some are even counterproductive. For example, testing is not the enemy, and highlighting and rereading text can fool your confidence (p. 15).

Remedies for Misguided Methods

These misguided methods appear in the professional development of many disciplines—not just education—but also medicine, aviation, and even athletics. The authors present practical applications of their research findings through stories of real people benefitting from effective practices. This reader could place herself in most of these scenarios (with the possible exception of propelling oneself out of an airplane!) to appreciate the value of viewing "mistakes not as failures but lessons and turning points along the path to mastery (p. 91)." In doing so, the authors explain and persuade that learning is enhanced when it is "effortful." In eight well-titled chapters, they leave us with some stamina-building remedies:

- As a starting point, **get a better grasp of what it means to really learn something** by understanding the role that memory plays in encoding and consolidating information for later retrieval.

The learning practices codified in this book are based on hundreds of studies in scientific literature about cognition and memory. K–12 educators will find familiar references to the work of Carol Dweck (*Mindset: The New Psychology of Success*, 2008), Paul Tough *(How Children Succeed)*, and Daniel Willingham *(When Can You Trust the Experts: How to Tell Good Science from Bad in Education*, 2012). It is noted that Willingham was among the formal reviewers of this book and has recently published *Outsmart Your Brain: Why Learning Is Hard and How You Can Make It Easy*, 2023, which may also be of interest to readers of *Make It Stick*.

- **Retrieval is critical to making learning stick**. Frequent quizzing (self-imposed and otherwise) provides an immediate application of knowledge that cements learning.

It appears that ticking back through what you know to select the cogent information necessary for an immediate answer—although effortful—is exactly how the brain secures the circuitry. "Effortful learning changes the brain" (p. 199). Writing about what we've read is another example for practicing retrieval.

- **Mixing up practice**, called "interleaving," **strengthens the retrieval process**.

Interleaving is when two or more skills are practiced at once (p. 49). In the context of an early reader, interleaving occurs, for example, when students practice both new and previously taught spelling patterns in decodable text or word sorts that include multiple patterns.

- **Spacing out practice** allows for some forgetting and this **bolsters the memory muscle** (p. 48). In other words, when retrieval is harder, it makes the learning more durable.

This finding has implications both for K–12 instruction and the professional learning community schedule. Stuck in a cycle of *teach it, test it, teach it, test it,* we are advised to revisit learning after longer intervals. The effort to retrieve slightly forgotten knowledge supports permanence (p. 63).

- **Reflection is a form of practice** that enables incorporation of new material with old (p. 26). And elaboration is the process of giving new material meaning by expressing it in your own words and connecting it with what you already know.

From an English language arts teacher's perspective, reflection affords a reshaping of schema that we may take for granted if we fail to activate background knowledge, leave questioning at the literal level, or short-circuit elaboration. "Learning always begins on a store of prior knowledge (p. 100)." As our profession is beginning to appreciate the importance of background knowledge to reading comprehension, we need to build in time for reflection and consolidation.

Other Implications for Teachers of Reading and Those Who Prepare Them

In the context of structured literacy, I confess to overthinking how the effective strategies presented in this book align with an explicit and systematic approach to teaching reading—at least the foundational skills of word recognition. For example, a structured literacy approach recommends immediate, positive corrective feedback, as opposed to delayed feedback (pp. 39, 90); also, multiple repetitions when first introducing phoneme-grapheme correspondences flies in the face of spaced and varied practice.

What I learned in the process of reshaping my own schema is the distinction between **procedural learning** (e.g., breaking the code; letter formation) and **conceptual learning** (e.g., structure building to support a mental model). To be clear, this book was not intended to disentangle these two types of learning; nor do I wish to distract from the book's purpose and value. But for the International Dyslexia Association's audience of structured literacy teachers, it seemed prudent to at least call out this distinction ahead of time to fully appreciate the research illuminated by these authors.

According to McDaniel, "…both procedural learning (writing capital letters, learning other motor or school-related procedural skills) and conceptual learning (learning categories, concepts) can be *enhanced* [emphasis added] through interleaved vs. blocked repetition (per email exchange, 01.31.23)." Therefore, it seems defensible that when it comes to foundational reading skills a K–3 student may need to first grasp the new procedural skill—be it the alphabetic code or multiple meanings of a word—through **direct and explicit instruction** to fully realize the benefits of "make it stick" practices. Simply put, structured literacy practices and "make it stick" practices are not incompatible, but quite complementary.

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The opinions of this reviewer are not necessarily the opinions of the International Dyslexia Association.

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