

THE COLLECTION

A periodic publication of
curated articles from the
Virginia State Literacy Association

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VSLA

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Dear Fellow Educators,

It is with great pride that we introduce the latest edition of *The Collection*, a publication series designed to meet the needs of educators through a themed topic that is relevant to current literacy research and educational climate. The current issue's theme revolves around ways to support phonological awareness. Each issue of this publication reflects VSLA's ongoing mission to lead the advancement of literacy for all learners through research-based strategies, innovative practices, and the sharing of educator expertise.

This edition of *The Collection* brings together a diverse collection of articles highlighting the ways educators are engaging students in meaningful literacy experiences. From preschool classroom phonological awareness practices grounded in the Science of Reading to the role of working memory in early literacy acquisition, these contributions showcase the dedication and creativity of Virginia's literacy leaders. You'll find insights into supporting early readers, both within and beyond the classroom.

We are especially proud to feature contributions from practitioners and researchers whose work exemplifies collaboration and commitment to literacy equity. Their perspectives remind us that literacy instruction is both an art and a science—rooted in research, enriched by experience, and driven by our shared belief in the power of reading.

As you explore this issue, I hope you find inspiration, affirmation, and new ideas to bring to your own learning community. Together, we continue to build a strong foundation for literacy across Virginia.

Thank you for your continued dedication to our students and to the teaching of literacy.

With appreciation,

Julie Janson Gray, PhD

President, Virginia State Literacy Association



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How Working Memory Holds Literacy Together



Phonological Awareness Instruction in Preschool

Courtney Kelly, Ed.D.
Associate Professor of Education
Marymount University

Phonological awareness (PA) is the ability to detect and manipulate sound structures in words based on sounds rather than word meanings. It is noted as a set of skills that are predictable of children's later reading skills (Ehri et al, 2001; Scarborough, 2001; Snow, Burns, & Griffin, 1999, Phillips, Clancy-Menchetti, & Lonigan, 2008). The terms "phonological awareness" and "phonics" are often confused, as they are inextricably related. Phonics refers to a reader's ability to connect sounds with written letters. Phonological awareness refers to the awareness of sounds heard and manipulated orally, with four specific levels: Word level, syllable level, onset-rime level, and phoneme level (Adams, 1990; Lane, Pullen, Eisele, & Jordan, 2002). At the PA word level, young learners are asked to identify specific words in a given sentence or phrase, as in /The/ /cat/ /sat/ /on/ /a/ /yellow/ /mat/. At the PA syllable level, this same sentence could be used, and students would be asked to identify individual syllables, noting the two syllables in "yellow." The third PA level, onset-rime, is often referred to as "word families." The onset-rime level of PA requires students to recognize the onset, or beginning sound in a word, with the rime, or the final rhyming sound. Using the sentence provided, students would be asked to identify the

initial sound (onset) /s/ and the rime /at/ as well as the /m/ and the /at/ sounds. The fourth and deepest level of PA is the phoneme level, in which students are able to articulate individual sounds in given oral words, such as being able to voice the /s/, /a/, and /t/ sounds in the word "sat." Phonological awareness is not sequential, meaning that a learner does not typically move from the word stage to the phoneme stage in isolation (Anthony et al., 2003). Rather, these skills may develop simultaneously.

Phonological Awareness in Preschool Aged Children

Assessment of children's acquisition of foundational PA skills is critical in order to support their future reading development (National Early Literacy Panel, 2018; Ehri et al., 2001; International Reading Association, 2013). PA begins to develop as early as three years of age and becomes more advanced by four years of age (Gillon, 2004). These understandings were the impetus of a six-week session, focused on direct instruction of phonological awareness in a preschool setting, conducted with four-year-old students in a Northern Virginia preschool. Five students

Table 1
Pretest PAST Data of Preschool Participants

	Student 1	Student 2	Student 3	Student 4	Student 5
Concept of Spoken Word	4/6	3/6	1/6	4/6	3/6
Rhyme Recognition	1/6	6/6	6/6	4/6	6/6
Rhyme Production	0/6	6/6	4/6	2/6	0/6
Syllable Blending	6/6	4/6	2/5	5/5	N/A
Syllable Segmentation	3/6	3/6	4/6	5/6	N/A
Syllable Deletion	N/A	0/6	0/6	4/6	N/A
Phoneme Isolation of Initial Sounds	N/A	3/6	2/6	5/6	N/A
Phoneme Isolation of Ending Sounds	N/A	0/6	2/6	0/6	N/A

were administered the Phonological Awareness Skills Test (PAST), linked [here](#). Eight specific PA skills were assessed with the PAST: Concept of spoken word, rhyme recognition, rhyme production, syllable blending, syllable segmentation, syllable deletion, phoneme isolation of initial sounds, and phoneme isolation of ending sounds. The PAST pretest data of the five students indicated varied strengths at the word, syllable, onset-rime, and phoneme levels of phonological awareness (See Table 1.)

Based on these data, a lesson plan template was designed, based on the components of the PAST assessment. It is important to note that, while student 1 and student 5 were absent during one of the assessment days, they were still included in the direct instruction of PA. The lesson plan consisted of the following components, to be taught two days each week for six weeks: Syllable work, rhyming work, onset-rime work, phoneme work, targeted read aloud, and sound sort follow-up. Descriptors were provided on the originally created template to guide the teacher in explicit instruction based on these components. (See Table 2.)

Table 2

Phonological Awareness Lesson Plan Template

Syllable Work	<p>Materials: Short poem written on chart paper or posterboard; pointer</p> <p>Directions: Read the poem aloud, pointing to the words. Make sure that there are at least two words that have more than one syllable. Have students repeat the poem with you as you point to the words. Upon completion, point to each word that has more than one syllable. Have students “clap out” the syllables with you.</p>
Rhyming Work	Using the same poem as above, select 3-5 words. Ask students to name a word that rhymes. Example: “This word is ‘day’. A word that rhymes, or that has the same ending sound, is ‘say’. What is ANOTHER word that rhymes with ‘day’? See how many words students can generate.
Onset-Rime Work	Using the same poem as above, select 3-5 words. Ask students to replace the first sound (NOT the first letter, but sound) with another. For example, if the selected word is “cat”, instruct the students to say the word “cat” but to replace the /c/ sound with the /m/ sound. Practice this several times, using different initial phonemes (sounds).
Phoneme Work	Using the same poem as above, select 4-6 words in which you will have students remove the initial or medial (middle) phoneme. For example, if your word is “sleep”, ask students to “say the word sleep without the /s/ sound.” (They should say “leep”.) If your word is “map”, ask students to say the /o/ sound instead of the /a/ sound.
Targeted Read Aloud	Select a read aloud book that is engaging and is focused on specific sounds, such as <u>The Bug in the Jug Wants a Hug</u> . As you are reading, stop a couple of times to focus on rhyming words or phonemes in words.
Sound Sort Follow-Up	Put 10-12 items or pictures in a brown bag. Make sure each begins with one of two sounds, such as /b/ words and /m/ words. For this example, you may have a picture of a box, bat, bow, as well as a picture of a map, mop, mail, etc. Have students take turns pulling out one thing at a time. They will sort these into two columns based on initial sound.

After the first week of instruction, it was found that, while comprehensive, this template proved to be a bit difficult due to the ability of the preschool participants to be actively engaged for the amount of time the implementation of the full plan took. After the first week, the template was modified to better serve the preschool participants. The original final two elements of the lesson plan (targeted read aloud and sound sort follow-up) were removed, leaving the focus of the direct PA instruction on the recognition and generation of syllables, rhymes, onset-rimes, and phonemes.

After the modification of the lesson plan template, five weeks of direct PA instruction were provided to the preschool participants, which took approximately fifteen minutes twice per week. Table 3 provides an example of one of the implemented lessons after the template modifications were made.

After five weeks of direct PA instruction, utilizing the template in Table 3 with different poems each week, students were again administered the PAST assessment. The post-

Table 3

Week Two Phonological Awareness Lesson Plan

Syllable Work	<p>Read-aloud poem, pointing to individual words. Have students repeat poem with you at least one time, stopping at individual words to have students identify based on knowledge of the poem. After reading twice, have students clap along with the individual syllables.</p> <p>Hey diddle diddle. The cat and the fiddle. The cow jumped over the moon. The little dog laughed to see such fun, and the dish ran away with the spoon</p>
Rhyming Work	<p>"What rhyming words do you hear in the poem?" (diddle/fiddle and moon/spoon) "Can you think of any other words you know that rhyme with diddle and fiddle? With moon and spoon?" Encourage students to generate rhymes for each pair, such as "middle" and "tune".</p>
Onset-Rime Work	<p>Focus on the word "cat". "If we take the /c/ away and made it /s/, what would the new word be? What if we took away the /c/ and made it /m/? /b/? /r/? /ch/?"</p>
Phoneme Work	<p>"How many sounds do you hear in 'moon'? Let's clap them out. What about the word 'fiddle'? What about 'dish'?" (Clap out individual phonemes.)</p> <p>"What is the final sound in the word 'fun'?" "What is the second sound in the word 'ran'?" "What would the new word be if we took the /n/ out of 'fun' and made it the /s/ sound?"</p>

Table 4

Posttest PAST Data of Preschool Participants

	Student 1	Student 2	Student 3	Student 4	Student 5
Concept of Spoken Word	Pre: 4/6 Post: 4/6	Pre: 3/6 Post: 4/6	Pre:1/6 Post: 4/6	Pre: 4/6 Post: 4/6	Pre: 3/6 Post: 6/6
Rhyme Recognition	Pre: 1/6 Post: 6/6	Pre: 6/6 Post: 6/6	Pre: 6/6 Post: 6/6	Pre: 4/6 Post: 5/6	Pre: 6/6 Post: 6/6
Rhyme Production	Pre: 0/6 Post: 6/6	Pre: 6/6 Post: 6/6	Pre: 4/6 Post: 6/6	Pre: 2/6 Post: 5/6	Pre: 0/6 Post: 2/6
Syllable Blending	Pre: 6/6 Post: 5/6	Pre: 4/6 Post: 5/6	Pre: 2/5 Post: 6/6	Pre: 5/5 Post: 6/6	Pre: N/A Post: 6/6
Syllable Segmentation	Pre: 3/6 Post: 4/6	Pre: 3/6 Post: 0/6	Pre: 4/6 Post: 4/6	Pre: 5/6 Post: 5/6	Pre: N/A Post: 5/6
Syllable Deletion	Pre: N/A Post: 6/6	Pre: 0/6 Post: 2/6	Pre: 0/6 Post: 5/6	Pre: 4/6 Post: 3/6	Pre: N/A Post: 1/6
Phoneme Isolation of Initial Sounds	Pre: N/A Post: 5/6	Pre: 3/6 Post: 3/6	Pre: 2/6 Post: 5/6	Pre: 5/6 Post: 5/6	Pre: N/A Post: 6/6
Phoneme Isolation of Ending Sounds	Pre: N/A Post: 4/6	Pre: 0/6 Post: 1/6	Pre: 2/6 Post: 2/6	Pre: 0/6 Post: 0/6	Pre: N/A Post: 0/6

assessment results indicated student growth in many of the eight PA skills included in the PAST assessment. While this growth cannot be causally explained by the integration of the direct PA instruction template, each student's growth in skills is worth noting.

Conclusion

The preschool years are critical in the development of early literacy skills that will serve as the foundation for later skilled reading. Phonological awareness is a vital skill that serves as a predictor for reading achievement (Adams, 1990; Snow et al., 1998). Families and teachers of preschool-aged learners play an important role in developing these early literacy skills. The PAST assessment is one of many available PA assessments, allowing adults to base PA instruction, activities and experiences on data that may be used to help design specific, explicit. Incorporating specifically and intentionally designed instruction and activities that promote PA can enhance the overall preschool experience for young learners and can serve as a foundation upon which to build later reading skills.

Resources

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.

Anthony, J. L., Lonigan, C. J., Driscoll, K., Phillips, B. M., & Burgess, S. R. (2003). Preschool phonological sensitivity: A quasi-parallel progression of word structure units and cognitive operations. *Reading Research Quarterly*, 38, 470–487.

Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the national reading panel's meta-analysis. *Reading Research Quarterly*, 36(3), 250–287. <https://doi.org/10.1598/RRQ.36.3.2>

Gillon, G. T. (2004). *Phonological awareness: From research to practice*. NY: Guilford Press.

International Reading Association (2013). *Formative assessment: A position statement of the International Reading Association*. Newark, DE: Author. Retrieved https://www.literacyworldwide.org/docs/default-source/where-we-stand/formative-assessment-position-statement.pdf?sfvrsn=8da4af8e_9

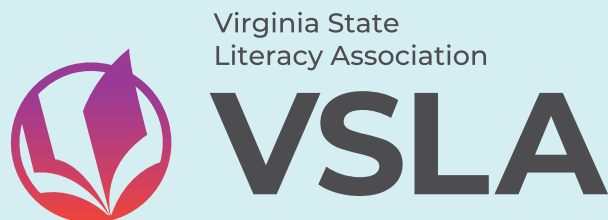
Lane, H. B., Pullen, P. C., Eisele, M. R., & Jordan, L. (2002). Preventing reading failure: Phonological awareness assessment and instruction. *Preventing School Failure*, 46(3), 101–111.

National Early Literacy Panel. (2008). *Developing early literacy: Report of the National Early Literacy Panel*. Washington, DC: National Institute for Literacy.

Phillips, B. M., Clancy-Menchetti, J., & Lonigan, C. (2008). Successful phonological awareness instruction with preschool children: Lessons from the classroom. *Topics in Early Childhood Special Education*, 28(1), 3–17. [doi:10.1177=0271121407313813](https://doi.org/10.1177/0271121407313813)

Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman, & D. Dickinson (Eds.), *Handbook for research in early literacy*, (pp. 97–110). New York, NY: Guilford Press.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academies Press.



The Collection Publication Series

Mission

The mission of Virginia State Reading Association, as an authority on literacy education, is to lead in the advancement of literacy across the Commonwealth.

TITLE: *The Collection* (volume 6): The Science of Reading, Spring/Summer 2026

Summer 2025 Publication Topic: Motivating Readers

- Submissions should focus on expanding the reader's understanding of the topic. This is an opportunity to provide teachers with insight regarding the way that instruction can motivate students toward becoming better readers. Submissions can provide teachers with strategies and instructional routines that can be used in content area instruction.

PROCESS for REVIEW/SELECTION:

Our articles are generally between 1000-2500 words in length and conversational, insightful, and helpful to K-12 educators. (Submissions that exceed 3000 words will not be considered.) Articles should be research-based and give concrete guidance that school leaders and educators can use to improve their practice. Moreover, articles should be written in a straightforward manner. Submissions should be relevant to a national audience interested in our given theme. You are addressing teachers, school administrators, researchers, and other stakeholders in the education community, so remember your audience.

What we look for:

- An engaging and informed analysis of the key issue and trend in education
- An informed perspective on this subject/controversial topic (evidence-based information that is practical for classroom instruction).
- An emphasis on the interpretation of the research rather than strict pedagogical theory
- Authentic examples or experiences from work in schools
- Useful articles with strategies/approaches that can be replicated in the everyday classroom

Avoid:

- Self-promotion or pushing a program or product
- Articles promoting your personal opinion
- Please do not include jargon. This is intended as a straightforward explanation of the topic.
- Submitting articles that are in the process of being reviewed for another publication.

How to Submit:

Timeline:

4/30/26 Deadline for submissions

5/1/26 - 5/15/26..... Review of Submissions

6/1/26..... Acceptance notification

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Cognitive Glue:

How Working Memory Holds Literacy Together

Victoria Schell

Abstract

This paper explores the vital role of working memory in early literacy development, particularly in phonological awareness and decoding. Drawing on current research and classroom observations, it argues that strengthening working memory through targeted interventions—such as memory games, scaffolding strategies, and multisensory activities—can significantly enhance reading outcomes. Integrating cognitive supports into literacy instruction is essential for helping all students achieve reading success.

Introduction

Despite the widespread adoption of evidence-based reading instruction, many students in grades K–2 continue to struggle with foundational literacy skills such as oral segmentation, blending, and decoding. As a reading specialist, I observed this pattern consistently, prompting me to question why some students excelled while others lagged behind—even when both groups received targeted, research-based interventions. These readers, often labeled “word callers,” read fluently but struggle with unfamiliar words and deeper comprehension, suggesting a cognitive overload. This discrepancy suggests that their working memory may be overburdened by surface-level processing, limiting their capacity to engage with more complex reading tasks. The reading interventions appeared sound on the surface, but they weren’t reaching the root of the issue for these students.

Even after completing extensive training and earning certification in evidence-based approaches grounded in the science of reading, I realized that an essential component was still missing. My continued investigation into the disconnect between instruction and student outcomes led me to a critical insight: working memory plays a foundational role in reading development and may be a key differentiator between successful and beginning readers. This paper argues that early reading instruction must integrate strategies to strengthen working memory in order to support phonological awareness and promote literacy success among young learners.

Understanding Working Memory

Working memory is the mental workspace that allows individuals to temporarily store and manage information while engaging in complex tasks such as reading, problem-solving, and following directions. Even though working memory is often confused with short-term memory, they serve two different purposes. While short-term memory serves primarily to store information passively for a brief time, working memory allows for active processing and manipulation of that information (Shvartsman & Shaul, 2023). In educational settings, this means students must not only recall letters or sounds but also integrate and apply them during real-time tasks such as sounding out and blending unfamiliar words.

Baddeley and Hitch’s (1974) Working Memory Model provides a well-established framework to understand this system, consisting of four interrelated components: the central executive, the phonological loop, the visuospatial sketchpad, and the episodic buffer. The central executive functions as the brain’s control tower, managing attention, switching between tasks, and coordinating the flow of information. The phonological loop processes auditory and verbal information, playing a crucial role in tasks like phoneme segmentation and decoding. The visuospatial sketchpad manages visual and spatial information, helping students remember letter shapes, read text from a page, or visualize story elements. Finally, the episodic buffer serves as an integrative component, combining information from different sources and linking it with long-term memory. This

allows students to draw from previous knowledge while making sense of new phonetic patterns and reading material. Research underscores the essential role working memory plays in literacy. In fact, the areas of the brain that support working memory overlap with those involved in reading (see Figures 1 and 2).

Figure 1

Brain regions associated with working memory tasks, including the central executive and phonological loop functions.

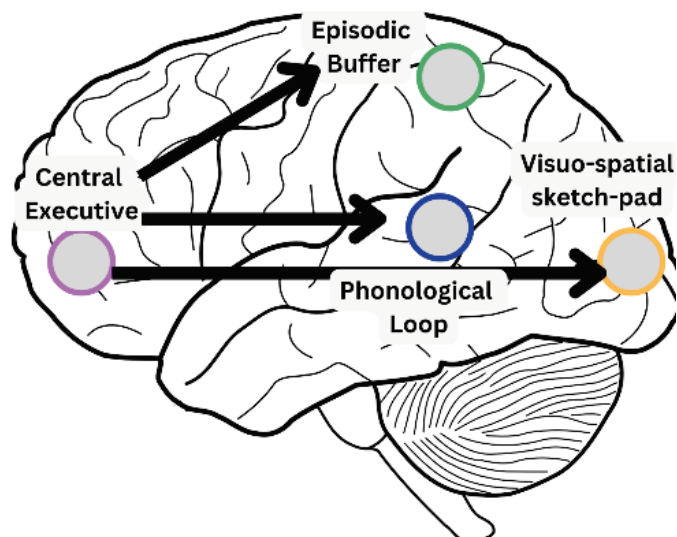
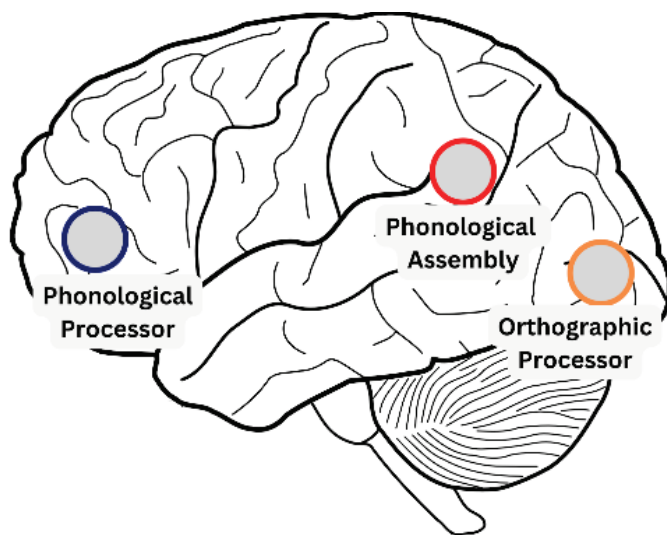


Figure 2

Brain regions associated with reading processes, showing overlap with working memory areas such as the temporal lobes.



As shown in Figures 1 and 2, these overlapping regions highlight why working memory is so critical for literacy development. According to Shvartsman and Shaul (2023), working memory supports oral language processing, decoding, and comprehension by holding and manipulating linguistic information in real time. However, its capacity

is limited, with Miller's (1956) classic research suggesting that individuals can retain approximately 7 ± 2 pieces of information at one time. More recent studies by Gathercole and Baddeley (1993) emphasize that verbal information in the phonological loop decays after just one to two seconds unless actively rehearsed. These constraints are particularly significant for young learners, who must juggle multiple processes—sound-symbol correspondence, syntax, and meaning—simultaneously.

Children with limited working memory may struggle to blend phonemes, decode unfamiliar words, or keep track of sentence structure. They may begin a sentence with one idea and forget it by the end, resulting in fragmented or inaccurate comprehension. Even with strong phonics instruction, these students cannot apply what they've learned effectively unless cognitive demands are managed. Thus, instruction must not only teach what to read but also support how students process that information cognitively.

Memory at Work: How Working Memory Shapes Phonological Awareness

The relationship between working memory and phonological awareness is foundational in early reading development. Phonological awareness, the ability to identify and manipulate the sounds in spoken language, is reliant upon working memory to temporarily hold and process auditory information. Nevo and Bar-Kochva (2015) found that both skills are strongly correlated with early reading success, especially in the primary grades. Students with stronger phonological awareness can hold and manipulate sound units such as phonemes and syllables with greater accuracy, which directly impacts decoding and fluency.

Conversely, when students have limited working memory, their ability to engage in tasks requiring phonological processing—such as blending sounds or segmenting syllables—is compromised. Cardoso et al. (2013) observed that children with robust working memory are more efficient in processing auditory-verbal information, enabling them to decode unfamiliar words more efficiently and accurately. These children are also more likely to progress into fluent readers because they can process and store multiple components of a word or sentence while maintaining focus on comprehension.

Moreover, working memory is essential for maintaining the thread of meaning across sentences and paragraphs. Hamilton et al. (2016) point out that students who decode slowly often rely on working memory to process each word, leaving little capacity for higher-level tasks such as inference-making or integrating ideas across a text. This overuse of

cognitive resources for basic tasks leads to reading fatigue, decreased engagement, and lower overall comprehension. As academic texts become more complex in upper elementary grades, the gap between students with strong versus weak working memory widens. Schwenck et al. (2015) report that cognitive deficits—especially in working memory—become more predictive of academic underperformance through fifth grade. Without targeted cognitive interventions, struggling readers risk falling increasingly behind their peers. These findings highlight the necessity of early, proactive support that integrates phonological training with cognitive development.

Identifying Deficits in Working Memory

A formal assessment is not always necessary to identify if a student has a deficit in their working memory. Often, everyday classroom occurrences provide valuable insight into a child's working memory capacity. Educators can identify signs of a working memory issue simply by observing a student's performance in typical classroom activities. Key factors to watch for include difficulty following multi-step directions, challenges with processing and storing information, simple errors in schoolwork, a tendency to give up during tasks that require significant memory load, inattention, distractibility, and difficulty with time management (Holmes et al., 2010). For example, challenges with processing and storing information may manifest as difficulty keeping track of letter sounds when decoding words, or losing track when counting phonemes in words. These tasks require children to hold information in their mind while performing actions, and poor working memory can make this difficult. Similarly, errors in schoolwork—such as leaving off the endings of words, forgetting punctuation, or omitting words in written sentences—can indicate that a child's working memory is struggling to keep all necessary components in mind while completing their work.

When a classroom task requires a significant amount of working memory, such as retelling a story or sequencing events, children with weak working memory may often give up before completing the task. These children may feel overwhelmed by the mental load required to complete these activities. In addition to these cognitive challenges, working memory deficits often lead to inattention and distractibility, which can further complicate a child's ability to stay focused during tasks that demand sustained concentration. Understanding these signs in everyday classroom interactions can help educators identify and support students with working memory challenges.

Boosting Working Memory in the Classroom

To address the needs of students with persistent reading challenges, targeted interventions that combine phonological awareness training with memory-boosting strategies are especially effective. For example, intervention sessions might begin with memory warm-ups followed by explicit phoneme segmentation activities. Multisensory approaches, such as tracing letters while saying sounds, help reinforce neural connections and reduce memory strain. Given its critical role in reading development, working memory should be explicitly addressed in early literacy instruction. Educators can create classroom environments that reduce cognitive overload while simultaneously building working memory capacity over time.

Classroom memory games provide opportunities to observe working memory in action. During a personal observation of a small-group session of four second graders, students played a memory game matching consonant-vowel-consonant (CVC) words to pictures. One student, Katie, consistently struggled to decode the words she uncovered. When she revealed the word "sun," she paused after sounding out each phoneme. With teacher prompting, she eventually blended the sounds together. The teacher praised her effort and reflected that Katie needed repeated scaffolding to blend phonemes accurately. She later incorporated sound boxes and visual supports in future sessions to reduce her cognitive load. This moment illustrates how working memory challenges can impact reading performance, even within brief tasks, and how strategic instruction can provide necessary support.

Memory-Based Activities

Structured memory games are one approach to strengthening working memory through play. Gathercole and Baddeley (2001) found that cognitive training through game-based activities can enhance students' ability to hold, recall, and manipulate information. Activities might include:

- **Sound Stories:** Start with telling a story and students add the sounds that happen during important parts of the story. Take away the narrative and ask students to retell the story with just the sounds.
- **Memory Match:** A visual recall game using cards with letters, pictures, or vocabulary words to develop visual-spatial memory.
- **Word Recall Sequences:** In which students repeat a series of words, numbers, or sounds after a brief delay, reinforcing phonological loop engagement.

- **Landmarks:** As a class, create a list of interrelated words (geographical locations, vocabulary words, story settings, etc.). Then, students create their own movements for each word.

These games can be used to teach, practice, and reinforce numerous literacy skills. If solely focusing on literacy skills, teachers might use rhyming pairs or CVC (consonant-vowel-consonant) words. However, memory games can also be used to reinforce information cross-curriculum. For instance, using vocabulary words from a current science unit as the content for memory games, providing both cognitive and linguistic reinforcement while review key science terminology.

Access to standard board games like *Sorry*, *Connect Four*, and *Jenga* can also boost students' working memory through the use of strategy, as these games require players to plan moves ahead, remember previous actions, and adapt to changing game dynamics—all of which engage and strengthen executive functions such as working memory (Vita-Barrull et al., 2023). Memory strengthening games can be played during morning meeting, transitions, lesson warm-ups, and even during indoor recess.

Scaffolding Supports

Beyond games, instructional scaffolding is crucial. This can be achieved through visuals such as graphic organizers, images of key terms/vocabulary, and diagrams that provide students with structured support, helping them connect new information to prior knowledge and enhancing their comprehension (Hameed & Ateha, 2020). Graphic organizers, such as story maps or sequencing charts, help students externalize and structure their thoughts, easing the burden on working memory. Sentence frames and anchor charts offer language models that reduce the need for students to generate sentences from scratch, allowing them to focus more mental energy on meaning-making. Interactive read-alouds with repeated phrasing, visual support, and strategic questioning also support working memory by chunking and reinforcing information (McClure, 2017).

It is important to remember, building working memory should not be seen as a separate goal from reading instruction. Rather, it must be viewed as a critical support mechanism that enables reading strategies to take root and flourish. Teachers that integrate cognitive skill-building into their reading frameworks are more likely to see sustained gains among their most vulnerable learners.

Conclusion

While evidence-based reading instruction has improved classroom practices, it is not sufficient for all learners—particularly those who struggle due to unaddressed cognitive challenges. Working memory plays a critical yet often overlooked role in literacy development, supporting decoding, comprehension, and the ability to manipulate and apply information during reading. To truly close the literacy gap, educators must incorporate strategies that both reduce cognitive load and strengthen working memory. Research-backed tools like memory games, graphic organizers, and structured interventions help students engage more effectively with text. Embedding cognitive development into daily instruction ensures that students have the mental resources necessary to benefit from literacy teaching. Reading success relies not only on phonics and fluency but also on the brain's capacity to process and retain information. By acknowledging this complexity, educators can better support all students in becoming confident, capable readers.

References

- Baddeley, A., Chincotta, D., & Adlam, A. (2001). Working memory and the control of action: Evidence from task switching. *Journal of Experimental Psychology: General*, 130(4), 641–657. <https://doi.org/10.1037/0096-3445.130.4.641>
- Baddeley, A. D., & Hitch, G. (1974). Working memory. In G. H. Bower (Ed.), *Recent advances in learning and motivation* (Vol. 8, pp. 47–89). Academic Press. [https://doi.org/10.1016/S0079-7421\(08\)60452-1](https://doi.org/10.1016/S0079-7421(08)60452-1)
- Cardoso, A. M. S., Silva, M. M., & Pereira, M. M. B. (2013). Consciência fonológica e a memória de trabalho de crianças com e sem dificuldades na alfabetização [Phonological awareness and working memory in children with and without literacy difficulties]. *CoDAS*, 25(2), 110–114. <https://www.scielo.br/j/codas/a/zBQbZQVDfpsHwHr4FLJj8Kt/abstract/?lang=en>
- S. E., & Baddeley, A. D. (1993). *Working memory and language*. Psychology Press. <https://doi.org/10.4324/9781315804682>
- Hamilton, C., Freed, E., & Long, D. L. (2016). Word-decoding skill interacts with working memory capacity to influence inference generation during reading. *Reading Research Quarterly*, 51(4), 391–402. <https://doi.org/10.1002/rrq.148>

- Hameed, D. T., & Ateha, H. M. (2020). The effectiveness of using visual scaffolding strategy in teaching English speaking skill to intermediate school students. *Journal of Tikrit University for Humanities*, 27(10), 14–33. <https://doi.org/10.25130/jtuh.27.10.2020.24>
- Holmes, J., Gathercole, S. E., & Dunning, D. L. (2010). Poor working memory: Impact and interventions. In R. V. Kail (Ed.), *Advances in child development and behavior* (Vol. 38, pp. 1–33). Academic Press. <https://doi.org/10.1016/B978-0-12-374748-8.00001-9>
- McClure, E. L. (2017). Supporting students' reading development through interactive read-alouds of informational texts. *The Reading Teacher*, 71(6), 731–738. <https://doi.org/10.1002/trtr.1576>
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81–97. <https://doi.org/10.1037/h0043158>
- Nevo, E., & Bar-Kochva, I. (2015). The relations between early working memory abilities and later developing reading skills: A longitudinal study from kindergarten to fifth grade. *Mind, Brain, and Education*, 9(3), 154–163. <https://doi.org/10.1111/mbe.12084>
- Schwenck, C., Dummert, S., Endlich, D., & Schneider, W. (2015). Cognitive functioning in children with learning problems. *European Journal of Psychology of Education*, 30(3), 349–367. <https://doi.org/10.1007/s10212-014-0242-5>
- Shvartsman, M., & Shaul, S. (2023). The role of working memory in early literacy and numeracy skills in kindergarten and first grade. *Children*, 10(8), Article 1285. <https://doi.org/10.3390/children10081285>
- Vita-Barrull, N., Estrada-Plana, V., March-Llanes, J., Guzmán, N., Fernández-Muñoz, C., Ayesa, R., & Moya-Higueras, J. (2023). Board game-based intervention to improve executive functions and academic skills in rural schools: A randomized controlled trial. *Trends in Neuroscience and Education*, 33, 100216. <https://doi.org/10.1016/j.tine.2023.100216>

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2025-2026

VIRGINIA READER'S CHOICE

PRIMARY SCHOOL

Title	Author	Copyright Year	Publisher
Butt or Face?: A Hilarious Animal			
Guessing Game Book for Kids	Kari Lavelle	2023	Sourcebooks Explore
How This Book Got Red	Margaret Chiu Greanias	2023	Sourcebooks Jabberwocky
Buffalo Fluffalo	Bess Kalb	2024	Random House Studio
Yuna's Cardboard Castles	Marie Tang	2023	Beaming Books
Wild Blue: Taming a Big-Kid Bike	Dashka Slater	2023	Candlewick Press
Night in the City	Julie Downing	2023	Neal Porter Books
How Dinosaurs Went Extinct: A Safety Guide	Ame Dyckman	2023	Little, Brown Books for Young Readers
No Cats in the Library	Lauren Emmons	2024	Simon & Schuster/Paula Wiseman Books
Thank a Farmer	Maria Gianferrari	2023	Norton Young Readers
You're So Amazing!	James Catchpole	2024	Little, Brown Books for Young Readers

ELEMENTARY SCHOOL

Title	Author	Copyright Year	Publisher
The Lost Library	Rebecca Stead		
	& Wendy Mass	2023	Feiwei & Friends
Bea and the New Deal Horse	L. M. Elliott	2023	Katherine Tegen Books
Because of You, John Lewis	Andrea Davis Pinkney	2022	Scholastic Press
Hoops: A Graphic Novel	Matt Tavares	2023	Candlewick
Dogtown	Katherine Applegate		
	& Gennifer Choldenko	2023	Feiwei & Friends
The Secret Battle of Evan Pao	Wendy Wan-Long Shang	2022	Scholastic Press
The School for Whatnots	Margaret Peterson Haddix	2022	Katherine Tegen Books
Hidden Hope: How a Toy and a Hero			
Saved Lives During the Holocaust	Elisa Boxer	2023	Harry N. Abrams
The Skull: A Tyrolean Folktale	Jon Klassen	2023	Candlewick
Chupacarter	George Lopez & Ryan Calejo	2022	Viking Books for Young Readers

MIDDLE SCHOOL

Title	Author	Copyright Year	Publisher
The Mona Lisa Vanishes: A Legendary Painter, a Shocking Heist, and the Birth of a Global Celebrity	Nicholas Day	2023	Random House Studio
The Fire, The Water, and Maudie McGinn	Sally J. Pla	2023	Quill Tree Books
What Happened to Rachel Riley?	Claire Swinarski	2023	Quill Tree Books
The Last Hope in Hopetown	Maria Tureaud	2022	Little, Brown Books for Young Readers
The Town with No Mirrors	Christina Collins	2023	Sourcebooks Young Readers
The Night Raven (The Moonwind Mysteries)	Johan Rundberg,		
	Translated by A.A. Prime	2023	Amazon Crossing Kids
Something Like Home	Andrea Beatriz Arango	2023	Random House Books for Young Readers
Global	Eoin Colfer		
	& Andrew Donkin	2023	Sourcebooks Young Readers
It Happened on Saturday	Sydney Dunlap	2023	North Star Editions
A Perfect Mistake	Melanie Conklin	2022	Little, Brown Books for Young Readers

HIGH SCHOOL

Title	Author	Copyright Year	Publisher
Four for the Road	K. J. Reilly	2022	Atheneum Books for Young Readers
That's Not My Name	Megan Lally	2023	Sourcebooks Fire
The Silence that Binds Us	Joanna Ho	2022	HarperTeen
The Red Palace	June Hur	2022	Feiwei & Friends
Impossible Escape: A True Story of Survival and Heroism in Nazi Europe	Steve Sheinkin	2023	Roaring Brook Press
Divine Rivals	Rebecca Ross	2023	Wednesday Books
Rez Ball	Byron Graves	2023	Heartdrum
How to Survive Your Murder	Danielle Valentine	2022	Razorbill
Murder Among Friends: How Leopold and Loeb			
Tried to Commit the Perfect Crime	Candace Fleming	2022	Anne Schwartz Books
Now Let Me Fly: A Portrait of Eugene Bullard	Ronald Wimberly	2023	First Second