Re-examining Foundational Literacy Instruction in the United States:

A Case for Linguistic Phonics

Jennifer Newman, MS, CCC-SLP
Svetlana Cvetkovic, PhD

Abstract

How children are taught to read matters deeply; students who lack foundational literacy by the end of first grade often face long-term academic and emotional challenges. As efforts to raise reading achievement intensify, selecting instructional methods that are effective, efficient, and equitable is essential. Linguistic Phonics (LP) reframes how reading is taught by starting with spoken words to build strong links to print. Drawing on interdisciplinary research, this reorientation helps demystify English orthography and makes the code more accessible. Instead of emphasizing skills in isolation, LP fosters code learning through clear, multipurpose routines and meaningful application. Its simplicity and coherence support student learning and classroom implementation across diverse settings. This paper examines the research supporting LP and its potential to improve literacy outcomes by accelerating student learning, reducing teacher workload, and guiding future studies on its broader application.

Why Rethink Reading Instruction?

Research suggests that up to 95% of students could learn to read by the end of first grade with effective teaching (**Hasbrouck, 2021**; **Snow, 2021**), yet many students still fall short of this goal and face compounding academic and social challenges (**Cunningham & Stanovich, 1997**; **Juel, 1988**; **Torgesen, 2000**). The Decoding Threshold Hypothesis helps explain this discrepancy—students who do not reach a minimum level of decoding accuracy tend to avoid complex words and struggle to progress, regardless of ongoing intervention (**Double et al., 2019**; **Gaab & Petcher, 2022**; **Lyon, 2002**; **Wang et al., 2020**). This finding reflects a broader understanding that decoding proficiency is foundational; once students can recognize words automatically, cognitive resources become available for learning more advanced aspects of literacy.

Despite general agreement on the value of phonics, instructional practices often include components that may not be mutually supportive with one another. For example, explicit decoding lessons may be paired with leveled or patterned texts, which can lead students to rely on context or guessing rather than apply phonics during independent reading. Such combinations can blur the connections between speech and print, increasing cognitive load for both students and teachers (**Fien et al, 2015**).

Such inconsistencies may stem from common misconceptions about how reading develops. Although literacy includes multiple, interacting components, these are frequently taught in isolation, weakening their collective impact. This fragmented approach is evident in early literacy instruction, where foundational skills are often introduced without meaningful links to the broader language systems that give them purpose. For example, many programs postpone introducing the morpho-phonemic structure of English until students have mastered basic decoding. As a result, students are left to bridge critical concepts on their own—connections that could be made more efficiently through intentional integration (**Seidenberg, 2024**; **Share, 2025**).

This landscape is part of a larger educational ecosystem shaped by national organizations. The International Dyslexia Association (IDA) and EdReports, in particular, have significantly influenced literacy standards and curriculum adoption (**Spear-Swerling, 2019**). While these resources offer helpful frameworks, their criteria may inadvertently limit which programs gain traction. For instance, EdReports emphasizes Common Core alignment, a focus that does not always reflect instructional effectiveness. Similarly, IDA standards, rooted in dyslexia intervention, emphasize Orton-Gillingham-based approaches, which may not close proficiency gaps or suit Tier 1 instruction (**Seidenberg, 2024**; **Stevens et al., 2021**). As Hanford (**2023**) observes, these tools can serve as informal "shortlists," shaping which programs schools consider. To support more informed decisions, the Reading League (TRL) has introduced Curriculum Navigation Reports that highlight both strengths and limitations in existing materials (**TRL, 2024**). These reports may not be widely known, which invites reflection on how visibility—not just evidence—can influence what gets adopted.

Decision-making around reading instruction remains complex, as beliefs and assumptions continue to affect implementation (**Carnine, 2000**; **Hanford, 2018**; **Snow, 2024**). While many structured phonics programs represent meaningful progress (**Lane et al., 2025**), few have undergone rigorous evaluation or report improvements in standard scores —key indicators of long-term impact (**Kilpatrick, 2017**; **Petscher et al., 2020**; **U.S. Department of Education, 2025**). Meta-analyses reveal wide variability in program effectiveness, pointing to the need for higher quality research and better reporting standards (**Stevens et al., 2021**).

Additionally, some evidence-aligned approaches remain underrecognized—not due to lack of empirical support, but because they are less familiar. Linguistic Phonics (LP) is one such example. Though recognized in England's national guidelines as a form of systematic synthetic phonics (**Department for Education, 2025**), LP is still relatively unknown in the U.S., despite converging research showing strong gains in standard scores and percentile ranks (**Denton et al., 2006**; **McGuinness et al., 1996**; **Simos et al., 2007**). Brain imaging studies further demonstrate that intensive phoneme-based instruction can shift neural activity in dyslexic learners toward typical language regions, suggesting that early teaching can rewire reading pathways (**Herron, 2008**). Yet

LP remains underutilized, illustrating persistent challenges in translating research into classroom practice. As a result, many educators continue to use familiar programs that may lack the depth or flexibility needed for diverse student needs—underscoring the role of teacher knowledge in selecting and applying effective, preventive instruction. (Ellis et al., 2023; Folsom et al., 2017; Torgesen, 2010).

Linguistic Phonics offers a coherent instructional paradigm that makes the connections between speech, print, and meaning explicit from the start. By aligning instruction with how children process spoken language and how the writing system maps onto it, LP integrates essential elements of literacy into a practical, unified framework. This paper presents LP as a promising model for recalibrating foundational skills instruction by aligning instruction with how children become literate—building on shared goals while addressing often-overlooked aspects of reading development.

How Linguistic Phonics Aligns with Current Models

Linguistic Phonics draws on cognitive science, linguistics, and developmental psychology to promote a fluid path to mastering written language. It leverages children's natural capacity for spoken language and pattern recognition (McGuinness, 1997) while supporting efficient processing to build lasting understanding (Kirschner et al., 2006; Lovell, 2020). Working from this base of oral language, LP helps learners build reading proficiency through phoneme-grapheme mapping, while simultaneously expanding awareness of how larger elements of meaning are represented in print.

Recent models of reading converge on a view of literacy as a dynamic, interconnected process. Share's Combinatorial Model (2025) likens reading to a tree that grows "up and out" as phonological, orthographic, morphological, and semantic knowledge becomes increasingly refined, shaped by each learner's cognitive-linguistic profile and instructional experience. Seidenberg (2022) similarly shows how initial decoding instruction drives growth by activating pattern recognition and statistical learning, gradually forming a robust orthographic lexicon. These insights echo broader findings on how fluent reading emerges from the coordination of neural, linguistic, and affective systems (Connor et al., 2004; Dehaene et al., 2015; Orkin et al., 2022). Though developed decades ago, LP aligns closely with contemporary understandings, emphasizing coherence, transparency, and integration across systems.

What Makes Linguistic Phonics Different?

Given the complexity of English spelling, our brains benefit from a well-organized system. Because letter patterns can be highly variable, using sounds as the primary framework for organizing spelling may offer a more consistent and cognitively manageable approach (Clarke, 2012). While sharing core principles with other structured approaches, LP distinguishes itself through the following defining characteristics that may offer practical benefits for both learners and educators.

- **Spoken Word as the Starting Point:** Because written language is biologically secondary (Swain, 2025), beginning with spoken language is both developmentally appropriate and empowering (Herron, 2008). Students focus on sounds before print (e.g., *What sounds do you hear in sat?*), map phonemes to graphemes, and turn words they say into words they see (Herron, 2023). This orientation fosters a habit of pattern-seeking that extends from foundational graphic units to larger, meaningful chunks.
- **The Code as a Logical, Reversible System:** Phonemes become the fixed reference points—anchoring instruction around a finite set of sounds rather than an ever-expanding list of spelling options. This reorientation demystifies the writing system, supports efficient mental organization, and reduces cognitive load by eliminating the need to learn numerous "reading alternatives" (Lovell, 2020; McGuinness, 1997). As Ehri (2002) explains, it's the pronunciation of words, not their visual appearance, that activates recognition; even in silent reading, our brains are "talking."
- **Routines That Build Procedural Knowledge:** By encouraging students to engage in *doing and discovering* rather than memorizing, LP prioritizes simple routines, concise language, and minimal verbal clutter (McGuinness & McGuinness, 1998). Framing reading as a problem to solve—how letters represent sounds—encourages metacognition and metalinguistic awareness. Multimodal routines like "say-spell-read" coordinate inputs from the mouth, ears, eyes, and hands, strengthening the brain's reading circuitry (Herron, 2008; Torgesen et al., 2010).
- **Set for Variability:** LP cultivates mental flexibility by directly activating Set for Variability (SfV)—the brain's capacity to resolve mispronunciations and identify unfamiliar words (Edwards et al., 2022). LP treats SfV not as incidental, but as a critical, teachable component of fluent word recognition skills.
- **Multisyllabic Agility:** LP introduces polysyllabic words early using natural spoken syllable breaks, while drawing attention to common affixes. This approach binds pronunciation, spelling, and meaning without relying on rule-heavy instruction. It builds decoding stamina and supports access to complex texts—critical, as nearly half of first-grade words are polysyllabic (Kearns & Hiebert, 2021).
- **Immediate Feedback to Support Self-Regulation:** Teachers provide immediate, targeted feedback to build accuracy and encourage self-monitoring. This dynamic loop—more like a conversation than correction—fosters student agency. Embedded in meaningful tasks, these error corrections promote growth without overwhelming the learner (Hattie & Yates, 2014).

A Growing Body of Evidence

While many traditional approaches have supported students in developing foundational reading skills, emerging research suggests that instruction may be even more effective when it moves beyond isolated drills to foster transferable, integrated abilities (Orkin et al., 2022; Share, 2025). Linguistic Phonics has shown promising outcomes in both clinical and classroom contexts, with several studies reporting standard score gains exceeding those of more conventional programs. Empirical research—including randomized and quasi-experimental studies as well as neuroimaging data—suggests LP may be especially effective for a wide range of learners, including emergent bilinguals, students from underserved communities, and those with neurodivergent profiles (Amendum et al., 2011; Denton et al., 2006; Endress et al., 2007; McGuinness et al., 1996; Schechter & Chase, 2025; Simos et al., 2007).

In a study by Simos et al. (2007), students aged 7–17 who began below the 18th percentile showed normalized brain activation and marked reading gains after just two months of LP instruction. McGuinness et al. (1996) similarly reported an average gain of 13.7 standard score points in word recognition and 19.34 in decoding after 12 or fewer hours of one-to-one instruction, equivalent to 1.70 and 2.57 points per clinical hour. Brooks (2012) found LP particularly effective for older students with a history of reading failure, highlighting its adaptability.

Schools implementing LP have reported notable gains that exceed age expectations in reading and spelling (Case et al., 2023; Dias & Juniper, 2002). A longitudinal study by Gray et al. (2007) across twelve Northern Ireland schools found sustained progress across ability levels, regardless of students' starting points. Educators in the U.S. and Canada have cited both student growth and ease of use as reasons for adoption (Gordon, 2024; Harlacher, 2024; Truch, 2004), contributing to LP's growing presence in diverse settings.

While these findings are compelling, many of the studies cited are limited by small sample sizes, older publication dates, or quasi-experimental designs. Replication through larger, more rigorous trials would help validate and extend them.

Even so, these results offer encouraging insights. Traditional phonics programs often show modest gains of 0–9 standard score points in word reading (Kilpatrick, 2017), yet many students still struggle to reach grade-level proficiency (Vaughn et al., 2019). For older learners, persistent reading difficulties can impact confidence and engagement. Research points to interventions yielding gains of 12.5–25 points as more likely to close gaps. LP has demonstrated outcomes at the upper end of this range, offering a useful point of comparison in efforts to strengthen instructional impact.

Why Simplicity Matters in a Complex Code

This paper focuses on the prototype developed by McGuinness (1997; 2002; 2004), not to be confused with the *Linguistic Approaches* of the 1960s, which emphasized word families over phonemes. Through her analysis of writing systems and a detailed exploration of reading instruction since the late 1800s, McGuinness identified several successful early linguistic phonics programs and developed a prototype grounded in four core principles for teaching reading in opaque alphabetic systems like English:

1. Writing systems reflect the structure of their spoken languages.
2. Children must learn to "unglue sounds in words."
3. English operates through four systems of mapping logic.
4. Instruction is most effective when it aligns with how children naturally process spoken language.

English poses particular challenges: With roughly 40 speech sounds and only 26 letters, most phonemes have multiple spellings, and many graphemes represent different sounds depending on their context. This complexity places a high cognitive demand on learners and can lead to confusion if instruction lacks coherence.

To reduce this burden, McGuinness proposed anchoring instruction in phonemes—the finite sound units of speech—as a stable reference point. She describes phonemes as a "pivot point" that enables learners to unlock an otherwise opaque writing system. By beginning with encoding—segmenting the word, identifying its sounds, and mapping them to their most likely spellings, LP helps students see that any written word can be recoded back to its sounds, revealing the code's underlying logic and reversible structure. This focus on simplicity and pattern recognition allows students to integrate essential segmenting and blending skills, generalize early, and develop confidence in navigating the code.

In contrast, when phonics is taught through a long list of conditional "if...then" rules, frequent exceptions, and loosely organized spelling patterns, it can overwhelm young readers' developing reasoning and memory capacities (Mesmer & Rose-McCully, 2018). Research suggests that rule-heavy approaches may inhibit learning, while methods that prioritize pattern recognition and inductive learning promote stronger outcomes (Dienes & Berry, 1997; Kearns & Cooper-Borkenhagen, 2024; Reber, 1989). While many children do learn successfully with Structured Literacy, LP offers a streamlined approach that presents the English code not as unpredictable, but as logical and learnable.

Set for Variability: An Overlooked Element

Set for Variability (SfV), first introduced by Gibson and Levin (1975) and later expanded by Venezky (1999), refers to a reader's ability to refine initial decoding attempts when the result doesn't yield a recognizable word. Rather than relying primarily on context, SfV encourages students to adjust pronunciations based on their knowledge of sound patterns and meaning, strengthening decoding accuracy and flexibility (Edwards et al., 2022; Edwards et al., 2024; Savage et al., 2018).

Though some students develop this skill independently, explicit instruction in how to engage with irregularities in English can support all learners in matching partial decodings to known words

(Petscher et al., 2020). For example, a student might read *down* as /d/–/ō/–/n/, realize "dōn" isn't a word, and adjust the vowel to produce /down/ (Ginsberg, n.d). This process—flexing sounds to resolve mismatches—supports what Steacy et al. (2019) describe as "phonological cleanup," which in turn promotes successful word reading.

SfV may also contribute to orthographic mapping—the process through which known spoken words become linked to print and stored in long-term memory (Ehri, 2020; Ehri & Wilce, 1985). By helping students reconcile partial or inaccurate decodings with familiar spoken words, SfV supports the connections essential to this process. This kind of flexible problem-solving (Cartwright, 2019) aligns with findings by Colé, et al. (2014), who identified cognitive flexibility, particularly when applied to reading tasks, as a key contributor to early reading development. Gentry (2025) adds, "English spelling is a visual code needed for mapping to one's already existing spoken language to create meaning as a reader or writer" (para. 2). Building on this idea, Snow (2024) notes that spelling remains consistent even when pronunciation varies across dialects, further emphasizing the importance of instruction grounded in students' natural speech.

Despite strong research support, SfV is often overlooked in phonics instruction. Linguistic Phonics brings it to the forefront, weaving flexible decoding strategies into early lessons and offering students consistent practice and feedback. By highlighting variability from the outset, LP helps students recognize it as a natural and valuable part of language, rather than a source of confusion. This approach makes room for regional accents and natural variation, ensuring instruction feels familiar and relevant to students from diverse backgrounds (Beaven et al., 2022; Gray, 2007; Harrison, 2007). Grounded in what children naturally hear and say, LP helps all learners connect spoken and written language in ways that support fluent, skilled reading.

How LP Builds Transfer: Integrated Skill Practice and Accelerated Pacing

Because many Structured Literacy approaches prioritize accurate recall of individual components before introducing new material, the IDA notes that mastering the English code may take several years of systematic, explicit instruction, especially for students with dyslexia (IDA, 2020). While this level of precision supports accuracy, it can also slow momentum and delay students' access to purposeful reading. Linguistic Phonics takes a different view: Mastery is not an endpoint, but a process that unfolds through use. Students apply knowledge through immersive reading and writing tasks that enhance engagement, deepen understanding, and draw their attention to orthographic patterns. By engaging in meaningful reading and writing, students begin to rely less on external guidance and more on internalized knowledge, eventually reaching a point where learning accelerates independently, much like achieving escape velocity (Seidenberg, 2024).

A related factor is how texts are used. In some classrooms, decodable books may become the main teaching tool rather than a scaffold to reinforce sound-symbol links. Yet when students encounter grade-level texts, such as those used in DIBELS, they face multisyllabic words that require more advanced strategies (Hiebert et al., 2020). Overreliance on controlled texts or picture cues may limit acquisition of these skills. Duke and Mesmer (2018) contend that phonics disconnected from real reading can hinder transfer. LP addresses this by moving into authentic texts once core skills are established, blending explicit teaching with meaningful use. As Castles et al. (2018) explain, once students grasp basic correspondences, wide reading drives further code learning and builds deeper code knowledge, not the reverse.

Instructional routines like "say-spell-read" are used across subjects, reinforcing encoding as a way to anchor vocabulary in memory. Longer words are introduced using natural spoken syllable breaks, with explicit attention to affixes, helping students parse and assemble polysyllabic words (Austin et al., 2023; Kearns & Cooper-Borkenhagen, 2024; Zuck, 1974). LP also strengthens metalinguistic awareness by guiding students to examine spelling by position and context, which improves the quality of lexical representations (Perfetti, 2007). All students access the same core content; what varies is the intensity of support. When needed, small-group work reinforces shared routines, enhancing continuity and transfer—key factors in effective intervention (Fien et al, 2015).

A Middle Path Focused on Results

Structured Literacy (SL) has contributed to important advances, particularly for students with dyslexia (Galuschka et al., 2014). Still, some learners remain on the margins of full reading success, pointing to opportunities for broader impact. While SL provides valuable tools, other models may offer ways to support a wider range of learners and align more closely with the realities of classroom practice. In some contexts, the comprehensive nature of SL programs can require substantial training and instructional time, creating trade-offs between depth and usability. This can be further compounded when schools combine structured methods with other approaches to meet diverse needs, making it harder for struggling readers to build the momentum they need.

As a result, many researchers have called for a more balanced and adaptive approach—one that holds firm to evidence while remaining responsive to practical realities. More than two decades ago, Carnine (2000) emphasized the need for transparent, empirical research to guide instruction. Building on this, Stanovich and Stanovich (2003) argued that scientific literacy among educators is essential for evaluating claims, making informed decisions, and fostering a culture of evidence-based teaching. Recently, Petscher et al. (2020) have advocated for ongoing reflection and refinement of foundational literacy practices, while Seidenberg (2024) calls for a "recalibration" of the Science of Reading movement—integrating explicit instruction with the strengths of implicit learning.

Linguistic Phonics offers one such approach. Developed with both impact and usability in mind, LP supports consistent, rigorous instruction through reliable, teachable routines. While continued research is needed, LP invites reflection on current practices and openness to solutions that support all learners and the teachers who serve them.

Beyond Familiar Approaches—Expanding the Conversation

Rather than asking educators to teach more, Linguistic Phonics emphasizes focus and simplicity, removing barriers that can slow progress or diminish engagement. Its speech-oriented paradigm introduces the code clearly and efficiently, accelerating access to meaningful texts and supporting *all* learners, with instruction grounded in the structure of English. As reading specialist Harriett Janetos notes, "Simplify the subject, not the student"—a principle that resonates with efforts to design instruction that is both cognitively sound and accessible (**Janetos, 2025b**). Often described as intuitive and usable across varied settings, LP offers a more streamlined path for teachers and students (**Case et al., 2023**; **Chahbazi, 2023**; **Dias & Juniper, 2002**; **Fein, 2023**; **Gray et al., 2007**; **Janetos, 2025a**)

Although existing LP studies have limitations, the convergence of research, educator experience, and observed outcomes supports further exploration. As Kilpatrick (2015) and others have emphasized, rigorous studies—particularly those reporting standard score gains—are essential for refining instruction and deepening our understanding of what works. Supporting progress in the field also means fostering professional curiosity (**Goldenberg & Lambert, 2025**; **Hejtmanek & Rudzinski, 2023**) and ensuring educators have the preparation and support they need (**Moats, 2020**). Echoing this, Lyon and Goldberg (**2024**) remind us that scientific inquiry must remain open to revisiting assumptions as new evidence emerges—even those underlying structured literacy.

The accompanying chart outlines key features of LP and how it balances explicit instruction with opportunities for application and implicit learning. We offer this paper not as a prescription, but as a contribution to support reflection, collaboration, and openness to promising solutions for all learners.

A Linguistic Phonics Framework At a Glance

A Logical Orientation	Organizes spelling patterns into "folders" corresponding to the 40 English phonemes, easing extraneous cognitive load
Simultaneous Processing for Encoding	Engages speaking, hearing, and writing in concert to build neural pathways connecting sounds, letters, and meaning—optimizing intrinsic load
Integrated Routines	Leverages oral language and the reciprocal relationship between speaking and writing
Implicit Learning Catalyst	Explicit instruction of concepts, patterns, and procedures jump-starts the self-teaching mechanism
Promotes Flexible Mindset	Provides real-time feedback for adjusting mispronunciations and correcting misspellings
Early Access to Polysyllabic Words	Uses natural spoken syllable breaks to teach construction and deconstruction of polysyllabic words once basic sound-symbol skills are secure
Mastery Over Time	Encourages supported productive struggle, building self-regulation and enabling earlier transition with real texts.
Equitable Access	Promotes "keep–up" and "catch-up" learning using the same approach, but increasing time, dosage, or frequency
Efficient, Accessible, Practical	Readily adopted by teachers, reducing the need for extensive training or expensive consumable materials

References

Amendum, S. J., Vernon-Feagans, L., & Ginsberg, M. C. (2011). The effectiveness of a technologically facilitated classroom-based early reading intervention: The Targeted Reading Intervention. *The Elementary School Journal, 112*(1), 107–131.

Austin, C., Stephens, L., Demchack, A., & Solari, C. F. (2023). Orton-Gillingham: Which aspects are supported by research and which require additional research? *The Reading League Journal, 4*(3), 5-15.

Beaven, A., Comas-Quinn, A., & Hinton, N. (Eds.). (2022). *Systematic synthetic phonics: Case studies from Sounds-Write practitioners.* Research-publishing.net.

Brooks, G. (2012). *Evaluation of That Reading Thing: A literacy intervention for teenagers.* That Reading Thing.

Carnine, D. (2000). *Why education experts resist effective practices.* Thomas B. Fordham Foundation.

Cartwright, K. B., Marshall, T. R., Huemer, C. M., & Payne, J. B. (2019). Executive function in the classroom: Cognitive flexibility supports reading fluency for typical readers and teacher-identified low-achieving readers. *Research in Developmental Disabilities, 88*, 42-52.

Case, S., Philpot, D., & Walker, J. (2023). *A longitudinal study of literacy development using Sounds-Write.* Sounds-Write.

Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest, 19*(1), 5-51.

Chahbazi, N. (2023, January). *How and why a structured linguistic literacy approach closes the gap quickly.* Dystinct Magazine, (13).

Clarke, A. (2012). *Sounds and letters.* Spelfabet. **https://www.spelfabet.com.au/2012/06/sounds-and-letters/**

Colé, P., Duncan, L. G., & Blaye, A. (2014). Cognitive flexibility predicts early reading skills. *Frontiers in Psychology, 5*, 565.

Connor, C. M., Morrison, F. J., & Katch, L. E. (2004). Beyond the reading wars: Exploring the effect of child-instruction interactions on growth in early reading. *Scientific Studies of Reading, 8*(4), 305–336.

Cunningham, A. E., & Stanovich, K. E. (1997). Early reading acquisition and its relation to reading experience and ability 10 years later. *Developmental Psychology, 33*(6), 934–945.

Dehaene, S., Cohen, L., Morais, J., & Kolinsky, R. (2015). Illiterate to literate: Behavioural and cerebral changes induced by reading acquisition. *Nature Reviews Neuroscience, 16*(4), 234–244.

Denton, C. A., Fletcher, J. M., Anthony, J. L., & Francis, D. J. (2006). An evaluation of intensive intervention for students with persistent reading difficulties. *Journal of Learning Disabilities, 39*(5), 447–466.

Department for Education. (2025, September 10). *Choosing a phonics teaching programme: Validated SSP programmes.* GOV.UK.

Dias, K., & Juniper, L. (2002). Phono-Graphix—who needs additional literacy support? An outline of research in Bristol schools. *Support for Learning, 17*(1), 34-38.

Dienes, Z., & Berry, D. (1997). Implicit learning: Below the subjective threshold. *Psychonomic Bulletin & Review, 4*, 3-23.

Double, K. S., McGrane, J. A., Stiff, J. C., & Hopfenbeck, T. N. (2019). The importance of early phonics improvements for predicting later reading comprehension. *British Educational Research Journal, 45*(6), 1220-1234.

Duke, N. K., & Mesmer, H. A. E. (2018). Phonics faux pas: Avoiding instructional missteps in teaching letter-sound relationships. *American Educator, 42*(4), 12–18.

Edwards, A. A., Rigobon, V. M., Steacy, L. M., & Compton, D. L. (2024). Spelling-to-pronunciation transparency ratings for the 20,000 most frequently written English words. *Behavior Research Methods, 56*(4), 2828-2841.

Edwards, A. A., Steacy, L. M., Siegelman, N., Rigobon, V. M., Kearns, D. M., Rueckl, J. G., & Compton, D. L. (2022). Unpacking the unique relationship between set for variability and word reading development: Examining word- and child-level predictors of performance. *Journal of Educational Psychology, 114*(6), 1242-1256.

Ehri, L. C. (2002). Phases of acquisition in learning to read words and implications for teaching. *Learning and teaching reading, 7*(28), 7-28.

Ehri, L. C. (2020). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly, 55*, S45-S60.

Ehri, L. C., & Wilce, L. S. (1985). Movement into reading: Is the first stage of printed word learning visual or phonetic?. *Reading Research Quarterly, 20*(2) 163-179.

Ellis, C., Holston, S., Drake, G., Putman, H., Swisher, A., & Peske, H. (2023). *Teacher Prep Review: Strengthening Elementary Reading Instruction.* National Council on Teacher Quality.

Endress, S. A., Weston, H., Marchand-Martella, N. E., Martella, R. C., & Simmons, J. (2007). Examining the effects of Phono-Graphix on the remediation of reading skills of students with disabilities: A program evaluation. *Education & Treatment of Children, 30*(2), 1–20.

Fein, M. (2023). A speech-to-print, linguistic phonics approach: What is it and how does it compare to Orton-Gillingham? *The Educational Therapist, 44*(2), 4-12.

Fien, H., Smith, J. L. M., Smolkowski, K., Baker, S. K., Nelson, N. J., & Chaparro, E. (2015). An examination of the efficacy of a multitiered intervention on early reading outcomes for first-grade students at risk for reading difficulties. *Journal of Learning Disabilities, 48*(6), 602-621.

Folsom, J. S., Smith, K. G., Burk, K., & Oakley, N. (2017). *Educator outcomes associated with implementation of Mississippi's K–3 early literacy professional development initiative* (REL 2017–270). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory (REL) Southeast.

Gaab, N., & Petscher, Y. (2022). The development of reading and its neural correlates. *Developmental Science, 25*(5), e13247.

Galuschka, K., Ise, E., Krick, K., & Schulte-Körne, G. (2014). Effectiveness of treatment approaches for children and adolescents with reading disabilities: A meta-analysis of randomized controlled trials. *PloS one, 9*(2), e89900.

Gentry, J. R. (2025, January 14). *Why the human brain needs spelling.* Psychology Today.

Gibson, E. J., & Levin, H. (1975). *The psychology of reading.* The MIT press.

Ginsberg, M. (n.d.). *Set for variability: A reading strategy you might not know about.* Reading Simplified.

Goldenberg, C., & Lambert, S. (Hosts). (2025, April 9). Your questions answered (Season 9, Episode 14) [Audio podcast episode]. In *Science of Reading: The Podcast.* Amplify Education.

Gordon, E. (2024, August 10). Accelerating student progress with EBLI: Student data profiles. *Science of Reading Classroom.*

Gray, C., Ferguson, J., Behan, S., Dunbar, C., Dunn, J., & Mitchell, D. (2007). Developing young readers through the linguistic phonics approach. *International Journal of Early Years Education, 15*(1), 15-33.

Hanford, E. (2018–2023). *Reading* [Audio documentary series]. American Public Media.

Harlacher, J. (2024). *Evaluation of Reading Simplified: Analysis of implementation and outcomes in grades K–2.* Center on Multi-Tiered Systems of Supports, American Institutes for Research.

Harrison, A. (2007, June 7). New phonics method 'gets results'. [Television broadcast]. *BBC News.*

Hasbrouck, J. (2021, June). *ALL kids can read.* Ohio P-20 Literacy Collaborative.

Hattie, J., & Yates, G. C. R. (2014). *Visible learning and the science of how we learn.* Routledge.

Hejtmanek, D., & Rudzinski, M. (2023, January). What's stopping you? Trying a new reading approach. *Dystinct Magazine,* (13).

Hiebert, E. H., Toyama, Y., & Irey, R. (2020). Features of known and unknown words for first graders of different proficiency levels in winter and spring. *Education Sciences, 10*(12), 389.

Herron, J. (2008). Why phonics teaching must change. *Educational Leadership, 66*(1), 77-81.

Herron, J. (2023, January). Tips for the best start on the road to literacy. *Dystinct Magazine,* (13).

International Dyslexia Association. (2020). *Structured Literacy: Effective Instruction for Students with Dyslexia and Related Reading Difficulties.*

Janetos, H. (2025a, February 28). Science is open-minded and objective. *Substack*.

Janetos, H. (2025b, April 22). Occam's razor to the rescue. *Substack*.

Juel, C. (1988). Learning to read and write: A longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology, 80*(4), 437–447.

Kearns, D. M., & Cooper Borkenhagen, M. J. (2024). Following the rules in an unruly writing system: The cognitive science of learning to read English. *The Reading Teacher, 77*(5), 712-726.

Kearns, D. M., & Hiebert, E. H. (2021). The word complexity of primary-level texts: Differences between first and third grade in widely used curricula. *Reading Research Quarterly, 57*(1), 255-285.

Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties.* Wiley.

Kilpatrick, D. A. (2017, November). *Do you know which indicators explain intervention effectiveness most reliably?* International Dyslexia Association.

Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist, 41*(2), 75-86.

Lane, H. B., Contesse, V. A., Gage, N. A., & Burns, M. K. (2025). Effect of an instructional program in foundational reading skills on early literacy development of students in kindergarten and first grade. *Reading Research Quarterly, 60*(1), e607.

Lovell, O. (2020). *Cognitive load theory in action*. John Catt Educational.

Lyon, G. R. (2002, June 6). *Testimonies to congress: 1997–2002.* Center for the Development & Learning.

Lyon, G. R. & Goldberg, M. (2024, Winter). Scientific research and classroom practice: How structured literacy spans the divide. *Perspectives on Language and Literacy, 50*(1), 20-27.

McGuinness, D. (1997). *Why our children can't read, and what we can do about it: A scientific revolution in reading.* Simon and Schuster.

McGuinness, D. (2002). *A prototype for teaching the English alphabet code.* Reading Reform Foundation.

McGuinness, D. (2004). *Early reading instruction: What science really tells us about how to teach reading.* MIT Press.

McGuinness, C., & McGuinness, G. (1998, December). *The beans on implicit and explicit.* Phono-Graphix Reading Company.

McGuinness, C., McGuinness, D., & McGuinness, G. (1996). Phono-Graphix™: A new method for remediating reading difficulties. *Annals of Dyslexia, 46*, 73–96.

Mesmer, H. A., & Rose-McCully, M. M. (2018). A closer look at close reading: Three under-the-radar skills needed to comprehend sentences. *The Reading Teacher, 71*(4), 451-461.

Moats, L. (2020). Teaching reading is rocket science: What expert teachers of reading should know and be able to do. *American Educator 44*(2). 4-9.

Orkin, M., Vanacore, K., Rhinehart, L., Gotlieb, R., & Wolf, M. (2022). The more you know: How teaching multiple aspects of word knowledge builds fluency skills. *The Reading League Journal, 3*(2), 4-13.

Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading, 11*(4), 357-383.

Petscher, Y., Cabell, S. Q., Catts, H. W., Compton, D. L., Foorman, B. R., Hart, S. A., Lonigan, C. J., Phillips, B. M., Schatschneider, C., Steacy, L. M., Terry, N. P., & Wagner, R. K. (2020). How the science of reading informs 21st-century education. *Reading Research Quarterly,* 55(Suppl 1), S267–S282.

Reber, A. S. (1989). Implicit learning and tacit knowledge. *Journal of Experimental Psychology: General, 118*(3), 219-235.

Savage, R., Georgiou, G., Parrila, R., & Maiorino, K. (2018). Preventative reading interventions teaching direct mapping of graphemes in texts and set-for-variability aid at-risk learners. *Scientific Studies of Reading, 22*(3), 225-247.

Schechter, R., & Chase, P. (2025, January). *EBLI classroom efficacy report with MAP growth: Grades K–5 using NWEA MAP growth.* EBLI.

Seidenberg, M. S. (2022, March 22). *The "science of reading" is a work in progress.* Reading Matters.

Seidenberg, M. S. (2024, June 24). *Where does the science of reading go next?* [online presentation]. Accelerate Literacy: A Structured Linguistic Literacy Summit.

Share, D. L. (2025). Blueprint for a universal theory of learning to read: The Combinatorial Model. *Reading Research Quarterly, 60*(2), e603.

Simos, P. G., Fletcher, J. M., Sarkari, S., Billingsley-Marshall, R., Denton, C. A., & Papanicolaou, A. C. (2007). Intensive instruction affects brain magnetic activity associated with oral word reading in children with persistent reading disabilities. *Journal of Learning Disabilities, 40*(1), 37–48.

Snow, P. C. (2021). SOLAR: The science of language and reading. *Child Language Teaching and Therapy, 37*(3), 222-233.

Snow, P. (2024, March 14). Oral language and reading skills [Audio podcast episode]. *Voyager Sopris Learning.*

Spear-Swerling, L. (2019, June). *Here's why schools should use structured literacy.* International Dyslexia Association.

Stanovich, P. J. & Stanovich, K. E. (2003). *Using research and reason in education: How teachers can use scientifically based research to make curricular & instructional decisions.* Partnership for Reading (Project), National Institute for Literacy, US Department of Education.

Steacy, L. M., Wade-Woolley, L., Rueckl, J. G., Pugh, K. R., Elliott, J. D., & Compton, D. L. (2019). The role of set for variability in irregular word reading: Word and child predictors in typically developing readers and students at-risk for reading disabilities. *Scientific Studies of Reading, 23*(6), 523-532.

Stevens, E. A., Austin, C., Moore, C., Scammacca, N., Boucher, A. N., & Vaughn, S. (2021). Current state of the evidence: Examining the effects of Orton-Gillingham reading interventions for students with or at risk for word-level reading disabilities. *Exceptional Children, 87*(4), 397-417.

Swain, N. (2025). *Harnessing the science of learning: Success stories to help kickstart your school improvement.* Routledge.

The Reading League. (2024, February 28). *Introducing The Reading League's Curriculum Navigation Reports.* The Reading League.

Torgesen, J. K. (2000). Individual differences in response to early interventions in reading: The lingering problem of treatment resisters. *Learning Disabilities Research & Practice, 15*(1), 55–64.

Torgesen, J. K., Wagner, R. K., Rashotte, C. A., Herron, J., & Lindamood, P. (2010). Computer-assisted instruction to prevent early reading difficulties in students at risk for dyslexia: Outcomes from two instructional approaches. *Annals of dyslexia, 60,* 40-56.

Truch, S. (2004). *Remedial outcomes with different reading programs.* The Reading Foundation.

U.S. Department of Education. (2025, May 30). *U.S. Department of Education welcomes Dr. Amber Northern as senior advisor* [Press release].

Vaughn, S., Roberts, G. J., Miciak, J., Taylor, P., & Fletcher, J. M. (2019). Efficacy of a word-and text-based intervention for students with significant reading difficulties. *Journal of Learning Disabilities, 52*(1), 31-44.

Venezky, R. L. (1999). *The American way of spelling: The structure and origins of American English orthography.* Guilford Press.

Wang, Z., Sabatini, J. P., & O'Reilly, T. (2020). When slower is faster: Time spent decoding novel words predicts better decoding and faster growth. *Scientific Studies of Reading, 24*(5), 397–410.

Zuck, L. V. (1974). Some questions about the teaching of syllabication rules. *The Reading Teacher, 27*(6), 583-588.

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Svetlana Cvetkovic, PhD, is a former K–3 classroom teacher with over 20 years of experience in literacy education. After earning her M.A. in Literacy Leadership from San Diego State University, she served as a K–8 Reading Specialist in California and Maryland. Trained in multiple evidence-based approaches, including Orton-Gillingham and the Reading First initiative, she now works as a private interventionist using EBLI, a Linguistic Phonics approach. Her dissertation on sight word development continues to inform her research in RAN, fluency, spelling, and writing. Her vision is to disrupt the reading failure status quo from the first day of Kindergarten.

Jennifer Newman, MS, CCC-SLP, is ASHA certified and earned her master's degree in communication disorders from Emerson College in Boston and a certificate of advanced study in reading from the MGH Institute of Health Professions. She spent the first half of her 36-year career as a speech-language pathologist before moving into her current role as a reading specialist, with a consistent emphasis on the interplay between language and literacy. Initially trained in Orton-Gillingham, her longstanding interest in how speech, language, and print intersect led her to study Linguistic Phonics. She now tutors students in the Boston area using Evidence-Based Literacy Instruction (EBLI), a speech-to-print approach derived from the work of Diane McGuinness. She values the way Linguistic Phonics equips students to understand the logic of the code and thrive as confident, proficient readers.