



Unlocking the Code: The Impacts of a Structured Linguistic Phonics Program in Grades 4–8

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Why Study SLP in Grades 4–8?

Many districts and states have improved reading outcomes for K–3 students, but reading outcomes in grades 4–8 are often stagnant. Regardless of grade, word reading and reading efficiency are key skill thresholds that, if not mastered, may constrain comprehension in the middle and high school years (Wang et al., 2019). Despite their importance, many students enter grade 4 without these skills. At the same time, phonics interventions are rarely studied in Tier I settings past grade 2 (Shanahan, 2025). Additionally, intervention studies in grades 4–8 tend to target vocabulary, comprehension, or multicomponent interventions (Vaughn et al., 2022).

"Foundational literacy skills for adolescents are the word reading, word knowledge, sentence structure, and fluency skills that adolescents need to access sentence- and paragraph-level meaning of texts that promote academic and personal growth" (Lupo & Hesketh, 2026, p. 7).

As a result, it is unknown if high-quality phonics instruction is effective at improving the crucial skills of students' word reading and reading efficiency in grades 4–8. We set out to address this research gap. This report details the implementation of a structured linguistic phonics (SLP) program, its impact on students' foundational literacy skills, and teachers' and students' experiences with the program.

What Is SLP and How Has It Been Studied?

Phonics instruction teaches students how letters represent spoken English and how to use that knowledge to read and spell words and sentences. In the United States, explicit, systematic phonics instruction is widely recommended. We studied structured linguistic phonics (McGuinness, 2004), which—like many phonics programs—employs a strong focus on phonemic awareness not as an initial precursor to reading but as a consistent feature of learning the code of English. SLP features direct, explicit instruction with a carefully sequenced series of sound-spelling correspondences, while encouraging active understanding and reasoning about how written English encodes the sounds of spoken English.

Alongside the English code, SLP builds the following **core conceptual knowledge explicitly**:

- Letters are symbols that represent sounds.
- A sound can be spelled with one, two, three, or four letters (as in *dog*, *street*, *night*, and *dough*)
- Sounds can be spelled in multiple ways.
- One spelling can represent multiple sounds.

Theoretically, the SLP approach to explicit instruction helps students build a mental map of speech sounds linked to their potential spellings. Such a map may facilitate students' ability to use statistical learning and self-teach as they encounter unfamiliar words that are composed of spelling patterns they already know. It may also minimize the cognitive load of memorizing rules. Spellings in English—even rarer ones—are merely extensions of a semi-regular code. The SLP approach, then, establishes a foundation for flexible understanding of English orthographic patterns—some frequent, some infrequent, but patterns nevertheless.

Differences Between SLP and Other Approaches to Phonics

Unlike traditional phonics programs, SLP does not teach syllable types (closed/open), labels (short/long vowel, hard/soft consonant), or rules (syllable division, onsets/rimes, bonus or silent letters). Nor does SLP use sight/trick/heart words or flashcards. Instead, students focus solely on building their sound-spelling skills via exposure, practice, and feedback that gradually increases in complexity (Seidenberg, 2017). This allows the student to focus on the work of learning to decode and encode the most crucial sounds and spellings in English—not language terms, rules, and exceptions. For a fuller description about how the SLP approach compares with other popular phonics approaches, see Fein (2023).

Previous Research on SLP

While SLP is relatively untested in the United States, programs that share its characteristics have been studied. For grades 4–9, the U.S. Department of Education's Institute of Education Sciences recommends that interventions build students' decoding skills and provide purposeful fluency-building activities (Vaughn et al., 2022)—both of which are features of SLP. However, SLP itself has not been studied in these grades. For grades 1–3, one meta-analysis of reading interventions found that interventions that focused on phonological awareness were less effective than those that did not, and interventions that emphasized spelling were more effective than those that did not (Gersten et al., 2020). One small quasi-experimental study conducted in the UK found that the growth of a group of students receiving SLP instruction outpaced growth in a comparison group on decoding, fluency, and comprehension, but the study did not look at spelling or randomly assign teachers or students (Mills, 2024).

“There have been some studies focused on the teaching of phonics in grades 2 and up, but not many, and most of those have been aimed at struggling readers or dyslexic students” (Shanahan, 2025, p. 325).

Ultimately, previous research only provides suggestive guidance on how SLP might work in upper grades. No rigorous experimental study has yet examined the impact of SLP on students' word reading, reading efficiency, and spelling in grades 4–8.

How Did We Study SLP?

To understand how SLP impacts students' word reading, reading efficiency, and spelling in grades 4–8, we designed a mixed-methods study to examine a single SLP program: the United Kingdom-based program **Sounds-Write** (www.sounds-write.com). We used an experimental impact design supplemented by teacher surveys, teacher interviews, and student focus groups.

We conducted the study over two years in two U.S. districts—one in the southeast and one in the northeast—with three cohorts of teachers (shown in Exhibit 1). Within each cohort, teachers who participated in SLP (SLP teachers) were compared with similar teachers in their school or district who provided business-as-usual (BAU) instruction (BAU teachers). In total, 9 schools, 30 teachers, and 515 students participated in the study, but due to missing data and student attrition, 448 students were included in the outcome analyses. Details of student attrition rates are in Appendix A.¹

Due to demands on teachers, schools, and districts, the study's experimental design varied across each cohort of teachers. Instructional time for both SLP and BAU was similar for Cohorts 1 and 2 (daily instruction in Tier I, three times weekly in Tier II) but was lower for Cohort 3 (twice weekly in Tier II). SLP teachers were asked to deliver the SLP sessions for at least 30 minutes. Cohorts 1 and 3 participated in a randomized controlled trial (RCT) in which teachers or students were randomly assigned to the SLP or BAU group. Cohort 2 participated in a quasi-experimental design (QED) in which teachers chose to participate in either group.

Exhibit 1. Study Design, Duration and Cohorts

Study Type	Year 1 Tier I and Tier II (5 month implementation)	Year 2 Tier II only (3 month implementation)
District A (RCT)	Cohort 1 Teachers randomly assigned to SLP or BAU 3 schools, 11 teachers - Tier I: daily in grades 4–5 - Tier II: 3x weekly in grades 4–5 147 students	Cohort 3 Students randomly assigned to SLP or BAU 1 school, 12 teachers - Tier II only: 2x weekly in grades 6–8 96 students
District B (QED)	Cohort 2 Teachers chose SLP or BAU 5 schools, 7 teachers - Tier I: daily in grades 4–5 - Tier II: 3x weekly in grade 7 205 students	n/a

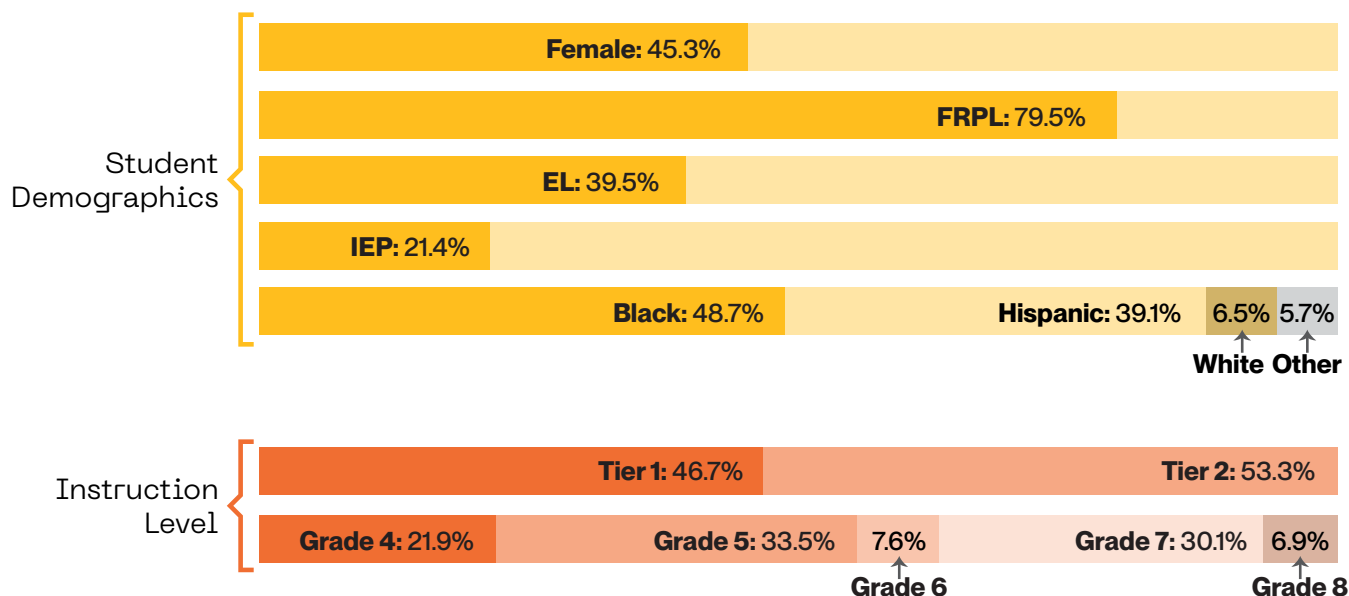
¹ Technical appendices to this report are available on the project website at <https://www.sri.com/education-learning/project/evaluation-of-structured-linguistic-phonics-instruction-in-grades-4-8/>

Comparison of SLP and BAU Teachers and Students at Baseline

The 30 study teachers across the SLP (n = 16) and BAU (n = 14) groups had similar characteristics: teaching experience (97% four or more years of experience), certification (all certified), education (82% master's degrees or above), and racial background (55% White, 35% Black, 10% Hispanic teachers). Two thirds of the teachers were certified in early childhood or elementary education (typically grades K-6, with some variation in licenses) with the remaining teachers certified in middle childhood (typically grades 4-8) or K-12 (e.g. special education). Therefore, the study results should be considered as the impact of SLP delivered by well-educated, certified, and racially diverse teachers.

The 448 students in the study with outcome data were racially and linguistically diverse with high percentages of students eligible for free or reduced-price lunch and most students in grade 4, 5, or 7 (see Exhibit 2). About 47% of the students received SLP instruction in their daily core Tier I classes, and about 53% received SLP instruction 2-3 times per week in Tier II classes for students who were identified as needing extra literacy support.

Exhibit 2. Demographic Information, Analytic Sample Across Cohorts (n = 448)



Note. FRPL = free or reduced-price lunch; EL = English learner; IEP = Individualized Education Program.

The overall sample was lower-performing than test takers nationally on the Rapid Online Assessment of Reading (ROAR) Word and Sentence subtests. At baseline, study students performed at approximately the 40th percentile in ROAR Word, which measures single word recognition, and the 17th percentile in ROAR Sentence, which measures sentence reading efficiency. These results suggest that the study students were slightly below average decoders but had substantial gaps in their sentence reading efficiency. Finally, we examined both SLP and BAU students' baseline word reading, reading efficiency, and spelling scores and found no differences between the groups.²

² For full technical details on baseline equivalence, see Appendix A.

BAU Instruction Across Cohorts

During the summer before SLP implementation, BAU teachers continued with typical preparations for the school year and did not report undertaking any special literacy professional learning initiatives.

In Cohorts 1 and 3 (District A), Tier I SLP and BAU literacy instruction involved the Wit & Wisdom curriculum. Alongside Wit & Wisdom and instead of SLP, BAU teachers implemented Morpheme Magic, a word-study curriculum that focuses on morphological awareness. In District A, Tier II BAU teachers delivered flexible instruction without a set curriculum, focusing broadly on fluency and comprehension.

In Cohort 2 (District B), the upper elementary Tier I SLP and BAU teachers used the Wonders curriculum, which includes a strand of word analysis instruction that supports phonics and spelling. SLP teachers replaced the phonics and spelling aspects of Wonders with SLP. The middle school Tier II BAU teacher used a curriculum with Scholastic Reader texts to focus on comprehension and vocabulary; the SLP teacher used the same Scholastic Reader curriculum two days weekly and replaced it with SLP on the other three days.

In sum, SLP instruction was woven into both districts' English language arts (ELA) instruction and was not an “add-on” intervention in either Tier I or Tier II. Therefore, in each cohort, SLP and BAU students received similar amounts of literacy instruction.

SLP Instruction Across Cohorts

During the summer before implementation, all SLP teachers completed a 36-hour asynchronous **training** on SLP theory, curriculum, and implementation. Teachers retained access to the SLP program's curriculum portal with instructional resources during the school year. The training was rigorous and included:

- videos and readings on the theory of SLP;
- explanations of the SLP curriculum materials, scripts, and manuals;
- analysis of videos of SLP instruction; and
- self-recorded videos of teachers delivering SLP for expert comment.

Cohorts 1 and 2 received a high dosage of expert SLP **coaching** during implementation. Each week, teachers had the opportunity to meet one-on-one with the expert SLP coach via Zoom, who answered questions on implementation and provided guidance, though not all teachers did so. The coaches visited each SLP school monthly to observe SLP instruction and provide individualized feedback.



Cohort 3 received a lower dosage of expert SLP coaching during implementation. An SLP coach offered virtual coaching sessions after school hours, but teachers infrequently participated in these sessions. No site visits were made to Cohort 3. Thus, the overall coaching support for Cohort 3 was lower than for Cohorts 1 and 2.

Amount of SLP Instruction and Absenteeism

The 16 SLP teachers implemented 48 SLP sessions on average. However, the mean varied across Tiers. Tier I teachers implemented SLP on a daily basis, typically to entire general education classes (average class size of 21 students). Tier II teachers implemented SLP two or three times a week to reading intervention classes of students who had need for extra reading support (average class size of 11).

Tier I teachers delivered a mean of 65 SLP sessions, while Tier II teachers delivered a mean of 34. Given that SLP sessions were intended to be 30 minutes or more, students in Tier I classrooms likely experienced an average of 33 hours of SLP instruction, and students in Tier II classrooms likely experienced an average of 17 hours. This is a substantial, though not unexpected, difference in dosage between Tier I and Tier II classrooms. We estimate that, across tiers, teachers delivered an average of about 24 hours of SLP instruction.

SLP teachers across all tiers reported that 18% of students were chronically absent (missing 10% or more sessions), a somewhat lower percentage than the state averages for Districts A and B. While some students missed SLP instruction, SLP class absenteeism appeared to be typical.

Fidelity of SLP Implementation

Exhibit 3 shows that, according to SLP teachers' exit surveys, most teachers reported implementing key aspects of SLP near-universally. This included the theoretical principles of SLP, such as focusing on its core conceptual knowledge and regular phonemic awareness instruction. Teachers' fidelity also included the key features of the carefully structured program, which include employing precise language and terminology (e.g., pronouncing letter sounds without adjacent phonemes, not using terms like "trick words"), following the carefully scripted lessons, and selecting practice words from a pre-planned list.



Teachers regularly, but somewhat inconsistently, implemented connected text reading and writing and the "teaching through errors" protocol. Connected text reading refers to students reading not just isolated words but complete sentences or paragraphs, which is beneficial for study students with low reading efficiency; connected text writing refers to not only spelling individual words but also completing sentence dictation exercises. Both are key elements of the SLP approach, but it appears that teachers implemented them less consistently than other key SLP elements.

The "teaching through errors" protocol is an SLP-grounded approach to in-the-moment

scaffolding of students’ oral reading errors based on SLP principles. This could be the most difficult SLP feature to implement. When used as designed, the protocol delivers precisely calibrated scaffolding to support students in accurate word reading and help them deepen their understanding of SLP concepts. The protocol describes multiple possible student errors for each lesson, along with precise corresponding responses that teachers should consistently use. When implemented as intended, these scaffolding routines provide immediate feedback and minimize cognitive load, but enacting the routines requires SLP teachers to use expert in-the-moment judgment.

Altogether, though, Exhibit 3 shows that SLP training and coaching helped teachers deliver quality implementation with strong fidelity to most of the core principles of SLP.

Exhibit 3. Teachers’ Self-Reported Implementation of SLP Features

Universal or Near-Universal Implementation by Nearly All Teachers ^a	Regular Implementation for Most Teachers, Inconsistent for Others ^b
• Instruction in SLP conceptual knowledge • Instruction in phonemic awareness • Employing precise language and pronunciation • Using lesson scripts • Using the program’s word lists	• Connected text reading • Connected text writing • Teaching through errors

^aFor these features, 15–16 teachers reporting using them in “more than half” or “nearly all” SLP sessions. None or one teacher reported using them in “fewer than half of lessons.”

^bFor these features, 7–11 of the 16 teachers reported using them in “more than half” or “nearly all” SLP sessions, but several teachers reported using them in only “half” or “fewer than half of lessons.”

What Was SLP’s Impact on Student Learning?

Students in both the SLP and BAU groups were assessed for their word reading, reading efficiency, and spelling skills before (pre) and after (post) the SLP intervention. Students’ single-word recognition and sentence reading efficiency were measured using the Rapid Online Assessment of Reading (ROAR; <http://roar.stanford.edu/>; Yeatman et al. 2021). The ROAR Word subtest is untimed and assesses students’ ability to determine if a letter string is a nonword (e.g., *concetent*) or a word (e.g., *overwhelm*). The ROAR Sentence assesses students’ ability to quickly read a series of single sentences within 3 minutes (e.g., “All cars are yellow”) and classify each sentence as true or false. The time limit thus measures students’ reading efficiency. Together, ROAR Word and ROAR Sentence capture both untimed single-word reading accuracy and sentence-level reading efficiency.

Students’ spelling abilities were measured using the Elementary and Upper-Level Spelling Inventories (ESI and USI) from *Word Study for Phonics, Spelling, and Vocabulary Instruction* (formerly *Words their Way*; Bear et al., 2023). Both assessments were administered by teachers via online data collection platforms.³ Student roster and teacher and student demographic data were obtained directly from the district partners.

³ For more detail on outcome measures, see Appendix A.

Impact Analysis Methods

Our analysis comparing student outcome scores across SLP and BAU groups combined data from all three cohorts.⁴ We employed two-level hierarchical linear models (student and teacher levels) to examine each outcome. The models adjusted for students' baseline achievement, demographic characteristics, grade level, and cohort. To estimate impacts separately for Tier I and Tier II instruction, we included an interaction term between the tier and SLP treatment indicators in the hierarchical linear models and derived tier-specific impact estimates from these models.

To explore potential differential program impacts across student subgroups, we added interaction terms to the model between each student background indicator (e.g., being female vs male) and the SLP treatment indicator. We assessed the statistical significance of these interaction terms to determine whether the impacts of SLP varied across subgroups.

Findings from this combined analysis across both districts, one using an RCT and another a QED, have the potential to meet What Works Clearinghouse (WWC) standards with reservations.

Impact Findings

Estimating the Size of the Impacts on Student Learning

Our main analysis focused on Tier I and Tier II students combined and provided an overall impact estimate across all students. Because Tier I and Tier II classrooms differed in student composition, instructional approaches, and the amount of instructional time, we also estimated program impacts separately for Tier I and Tier II.

Exhibit 4 reports estimated impacts and effect sizes for the overall sample and separately for Tier I and Tier II instruction. An effect size (ES), calculated as the difference between the treatment and comparison groups divided by the pooled standard deviation, shows the size of a program's effect in standard deviation units, allowing comparisons across outcomes and studies. We also translate statistically significant effect sizes into percentile improvement indices when discussing the results. The improvement index translates effect sizes into percentile gains for an average student (see box), making the magnitude of effects more intuitive to comprehend. For example, an effect size of 0.16 would increase an average student's performance from the 50th to the 56.4th percentile, corresponding to an improvement index of 6.4 percentile points.

Compared to a comparable BAU student, the average SLP student finished 6.4 percentile points higher on ROAR Word and 5.6 percentile points higher on ROAR Sentence, but did not differ on spelling.

⁴ See Appendix B for additional overall impact analysis for District A's smaller-scale RCT. We did not conduct a separate analysis of District B because, of the seven teachers, only two chose BAU, creating a sampling imbalance.

Overall, SLP students significantly outperformed BAU students on ROAR Word ($ES = 0.16$, $p = .024$; improvement index = 6.4) and ROAR Sentence ($ES = 0.14$, $p = .025$; improvement index = 5.6), with no significant impact on spelling assessments.

These findings are consistent with the RCT analysis using District A data only (see Appendix B).

Exhibit 4. Impact Estimates, Analytic Sample Combining Both Districts

Assessment	Estimated Impact	Standard Error	p Value	Student N	Teacher N	Effect Size
ROAR Word						
Overall impact	2.09*	0.92	.024	431	30	0.16*
Tier I	3.01*	1.43	.035	203	10	0.22*
Tier II	1.50	1.16	.197	228	20	0.12
Difference (Tier II–Tier I)	-1.51	1.79	.398	431	30	-0.11
ROAR Sentence						
Overall impact	2.45*	1.10	.025	427	30	0.14*
Tier I	3.24	1.66	.051	197	10	0.25
Tier II	1.96	1.32	.139	230	20	0.11
Difference (Tier II–Tier I)	-1.29	2.06	.532	427	30	-0.14
Spelling (ESI/USI)						
Overall impact	-0.08	0.06	.171	388	30	-0.08
Tier I	-0.07	0.09	.461	188	10	-0.07
Tier II	-0.09	0.07	.231	200	20	-0.09
Difference (Tier I–Tier II)	-0.02	0.12	.855	388	30	-0.02

*Statistically significant result ($p < .05$).

For Tier I students, impacts were positive and statistically significant on ROAR Word ($ES = 0.22$, $p = .035$; improvement index = 8.7) and marginally significant on ROAR Sentence ($ES = 0.25$, $p = .051$; improvement index = 9.9), but not on spelling assessments. The estimated impacts for Tier II students on all outcomes were smaller and not statistically significant.

However, as shown in Exhibit 4, the difference between the Tier I and Tier II impacts (SLP treatment-by-tier interaction) was not statistically significant for any of the outcomes. This indicates that even though SLP shows evidence of effectiveness in Tier I but not in Tier II settings, possibly due to instructional dosage effects, differences in student reading abilities, and small sample sizes, we cannot conclude that the impact differs across Tiers. Especially given the relatively small sample of teachers and students, these results should be considered suggestive rather than definitive. A larger sample would be needed to more reliably estimate impacts and determine whether they differ between Tier I and Tier II.

We further tested whether the impact of SLP on student outcomes differs by student baseline characteristics, such as achievement, free or reduced-price lunch, eligibility for English learner services, and students who qualify for special education services, but did not detect any differential impact. The program showed similar effects across student subgroups, suggesting that gains were not limited to already-advantaged students.

To explore the potential for more fine-grained impacts of SLP on students' spelling, we also conducted a spelling feature score analysis. This analysis examined whether SLP specifically supported students in mastering spelling patterns in the ESI. For example, a student spelling *ship* as *chip* could receive credit for the correct spelling of the vowel *i* and the ending consonant *p*, but not for the initial consonant digraph *sh*. We tested for improvements in students' within-word and letter-name features (Bear et al., 2023), but analyses showed null effects of SLP on these spelling patterns. Full details of the feature score analysis are in Appendix C. In sum, we did not find evidence that SLP students improved their spelling on particular features any more than BAU students did.

How Did Teachers and Students Experience SLP?

We surveyed SLP and BAU teachers at the beginning and end of SLP instruction on their literacy instructional practices, beliefs about reading instruction, self-efficacy for teaching reading, and knowledge of teaching reading. We also interviewed 14 of the 16 SLP teachers across all three cohorts about their experiences with SLP, the training and coaching, and classroom implementation, and about the suitability of SLP for grades 4–8 and multilingual learners. Finally, we conducted focus groups with 18 students in Cohorts 1 and 2 to explore their experiences and perceptions of their own learning during SLP instruction. We could not complete student focus groups for Cohort 3.

Teacher Knowledge, Beliefs, and Mindsets

SLP did not shift teacher knowledge and mindsets of reading instruction—but teachers started with a high baseline.

Pre- and post-surveys showed that both SLP and BAU teachers' beliefs about reading typically aligned with evidence-based reading practices, with slight variations. Nearly every teacher reported high self-efficacy in their ability to teach reading—as expected for an experienced and certified group of teachers—with no meaningful changes between pre and post. For example, 97% of teachers at pretest reported that they at least somewhat agreed with the statement “I continually look for better ways to teach reading,” indicating a motivated group of SLP and BAU teachers.

Both SLP and BAU teachers also demonstrated similar knowledge of evidence-based reading instruction at pretest, with slight increases for both groups during the study. The median percentage of correct responses for SLP teachers grew from 75% to 80%, while the median percentage for BAU teachers grew from 72% to 75%. Overall, we conclude that SLP training and instruction did not have a differential impact on teachers' beliefs about reading instruction, self-efficacy for teaching reading, or knowledge for teaching reading. The teachers were largely an experienced, well-educated group that was confident in their teaching skills at pretest and remained so at posttest.

Teacher Views of SLP

SLP teachers believed SLP to be more effective than BAU—and preferred SLP to other phonics approaches.

Exhibit 5 presents teachers' views of SLP. While not universal, 69% of SLP teachers generally found SLP to be more or much more effective than similar curricula, and 63% would “probably continue” or “definitely continue” using SLP next year. This is a positive endorsement of SLP use, even in grades 4–8.

Exhibit 5. Teachers' Views of SLP

How did the SLP approach compare to your other experiences with similar curricula designed to teach word reading and spelling? ^a				
SLP was much less effective	SLP was somewhat less effective	SLP was about as effective	SLP was somewhat more effective	SLP was much more effective
8% (1)	8% (1)	15% (2)	46% (6)	23% (3)
Would you like to continue using SLP next year?				
Definitely not	Probably not	Unsure	Probably would	Definitely would
0% (0)	6% (1)	31% (5)	25% (4)	38% (6)

^a Three teachers did not have experience with other word reading and spelling curricula.

Overall, teachers appreciated the distinct approaches that SLP brought to phonics instruction. In interviews, SLP teachers in both districts stated that they preferred the SLP approach to other phonics approaches, specifically to Foundations, Wilson Reading, Lexia, Just Words, RISE Phonics, and teacher-created programs.

One teacher noted that her colleagues also had expressed appreciation for the SLP approach. She reported that a colleague who typically used Wilson Reading for teaching students with disabilities provided positive feedback about SLP after a classroom visit: “She said that those kids really struggle with learning all those rules and things, and that she thought that Sounds-Write made it so much easier without having the rules.”

“The most effective thing for me was taking from Sounds-Write ... the fact that kids learn to speak first.”
—Grade 4 teacher

Teachers valued particular elements of the SLP instructional approach, such as its emphasis on phonemic awareness and focus on conceptual and code knowledge instead of rule-based methods.

Although teachers had positive views of SLP, teachers of older students were somewhat more ambivalent about whether they preferred SLP to other phonics approaches. One teacher noted its similarities to Wilson Reading, and another stated that “you could do either.” Teachers occasionally qualified their positive views of SLP by stating that they also perceived it as more feasible for younger-grade instruction. For example, one teacher noted that the lessons did not seem grade-appropriate for her grade 5 students. Similarly, four of the six SLP teachers in Cohort 3 (students in grade 6–8) indicated that SLP was not sufficiently challenging

for their middle school students, even though their students were selected for intervention because they scored in the bottom quartile at their school on the previous spring's state test.

Teachers expressed positive views of SLP despite the carefully scripted nature of the program.

Other qualitative studies of teachers' views of adolescent reading intervention have found that a scripted program constricts teacher agency (Frankel et al., 2025). However, one teacher simply stated that the SLP scripts "made it very easy to teach the lessons." Another teacher, who was "not a big scripts person," also noted that "it was easy." Additionally, one teacher felt that internalizing the script and the SLP approach allowed them to be more responsive to their students' emerging decoding challenges. The teacher explained:

The scripts enabled me to listen more to the student because I wasn't focused on what I was going to say to the next. I knew what I was going to say. My focus was more so on how they pronounce the sounds and how they're breaking the word apart and were they attacking it, or were they were making a mistake, where can I jump in for them.

In this way, the SLP program's scripted design also allowed for some teacher agency in choosing words, applying error correction methods, and selecting scaffolds.

The difference between the teachers in this study and those in prior studies (e.g., the studies analyzed in Frankel et al., 2025) could also be due to teachers being able to choose to participate in the SLP training and instruction, whereas teachers in prior studies often worked within curricular choices that school and district leaders had made for them. Teachers who choose to teach with scripted curricula may have a greater sense of autonomy than teachers who must use such curricula because of school or district choices. Additionally, unlike the studies in Frankel and colleague (2025), we may have sampled teachers who were already receptive to scripted curricula. That may explain why our interviewees tended to appreciate the scripted curricula more than teachers in prior research.

SLP teachers had universally positive views of the SLP training. All teachers completed a 6-week, 36-hour asynchronous training course before teaching with SLP. They appreciated the video content in the training, calling it "invaluable" and explaining that "by seeing someone else do it, it helps me understand what to do." Several teachers noted that they reviewed the training videos during the school year. A few minor concerns emerged: One teacher wished for training videos with older students, and several teachers noted the fast pace of the training. Despite these concerns, SLP teachers overall perceived the training as necessary and impactful.

SLP was "so different from anything we do, that without the proper professional development for it, there would be no chance of it being as great as it was."
—Grade 5 teacher

Teachers also appreciated the coaching. The two SLP coaches—one per district—were based in a different state than the teachers, and each had a caseload of about five study teachers. The SLP teachers described SLP coaches as readily available, helpful, knowledgeable, and attuned to teachers' needs. One teacher noted, "I feel like we had a lot of support ... [the coach] was always there to answer questions ... and she would

model stuff for us.” Another teacher highlighted how coaching supported their instructional development, explaining that the coach was “very helpful in guiding me and helping me understand how to be very effective ... and just getting into the flow of using the script.” Others highlighted the value of observing the coaches’ model instruction. One teacher praised the process of learning from the coach, after “seeing her model [SLP instruction], I tried my best to do it exactly like that”. Teachers reported that along with observing recorded and live lessons, coaching helped them implement SLP effectively. Overall, teachers had regular access to high-quality coaching and consistently described their experience as positive and practice-oriented.

Implementation Supports and Barriers

Supports for Implementation

In the interviews, all teachers reported implementing SLP. Most found that SLP’s structures and routines allowed them and their students to acclimatize in two to three weeks. One teacher said:

It was really quick. I mean, by the time we were in probably end of Week 2, beginning of Week 3, we were doing three parts every day. Because you do it so many times, it’s so repetitive, which is part of what helps them internalize it.

Many teachers also thought that having clear explanations of SLP’s underlying speech-to-print theory through the training, coaching, and materials may have facilitated implementation by solidifying their buy-in. In other words, teachers understood the theory and core instructional principles of SLP, which facilitated their mastery of the technical details of implementation.

Teachers also cited strong curricular resources, such as the online resource portal, extra word lists, and decodable books, and the scaffolded lesson design as factors that supported their implementation. In all cohorts, teachers cited peer and coach support as positive factors that facilitated the progress of learning to teach with SLP. In sum, the curricular materials, peer support, and coaching support worked together to facilitate teachers’ SLP implementation.

Barriers to Implementation

Two obstacles to implementation emerged from interviews: time and pronunciation concerns. Multiple teachers described needing more time and school schedule coordination to fully implement SLP. For example, in the Cohort 3 school, teachers implemented SLP during the school’s twice-weekly WIN (What I Need) time, in which teachers of any subject could pull students from assigned interventions to support those who were missing homework or had struggled on a recent test. The cumulative, sequential nature of SLP did not work well with this model. Even Tier I teachers in grades 4 and 5 echoed concerns about having sufficient time for implementation. For example, one Tier I teacher in District B noted that:

“It could have been significantly more effective had we been able to implement it three times a week.”

**—Grade 8 teacher,
Cohort 3**

Thirty minutes of phonics instruction a day is a lot to fit in when, within two 50-minute blocks, I'm required to do all my reading skills, my writing, teach Social Studies, and then I have all my children pulled out for various support services.

Ultimately, this feedback from teachers suggests that implementing SLP requires significant training time, coaching time, and class time.

Several teachers from both districts also noted that the mismatch between their own accents, the perceived “correct” accent, and the accents of the UK-based training materials was an obstacle. While teachers did not feel it was a major obstacle to SLP implementation, teachers who had Southern, Jamaican, and Brooklyn accents reported needing to adjust their speech to ensure that their pronunciations consistently aligned with key SLP characteristics, including a focus on phonemic awareness and precise pronunciation of sounds. Sounds-Write is designed to work across a range of accents and is used in England, Scotland, Wales, Australia, and New Zealand. However, it is possible that in the study school contexts, with racially and linguistically diverse teachers and students, that multiple dialects of English were spoken in classrooms. It may have been somewhat more difficult for our teachers and students to use shared pronunciations than it would have been for similar teachers and students in dialectically homogeneous schools.

Student Experiences with SLP

Teachers reported that students had positive experiences with SLP.

Most teachers reported good to great student engagement during SLP instruction. A few teachers reported middling engagement, and no teachers reported significant disengagement. Teachers of older students said they had to put extra effort into implementation to keep their kids engaged. One of these teachers noted that “it’s a little challenging to follow the script ... because we’re dealing with the middle schoolers.” Overall, though, teachers appreciated the variety that kept lessons from becoming monotonous, and they were able to produce engaging lessons.

Teachers also attributed improvements in their students’ academic performance to SLP instruction. They observed improvements in fluency as students read connected texts with greater ease. As one teacher explained, “Before Sounds-Write—or at the very beginning—it took [students] longer to get through the text. Now they read faster and better understand.” Another teacher emphasized that “polysyllabic-word lessons were instrumental in helping students become better readers and writers, not only within the general literacy block but also across content areas.” Some teachers tied progress to dosage and timing, with several wishing that implementation had begun earlier in the year and speculating that students would have experienced even greater learning gains.

Teachers found SLP to be particularly effective for their multilingual learners. As one teacher noted:

One thing I do see, especially with our ELs [English learners], is the vowel sounds, especially the /i/ and the /e/—they may spell peck instead of pick, but as far as making the connections with the phonics and the sounds and the words, I can see that. The growth has been phenomenal.

Students reported SLP instruction as appropriate, though at times insufficiently challenging.

In the six student focus groups, students expressed a range of opinions on the challenge level of SLP instruction. Two groups indicated that the level of challenge was appropriate. As one student reflected, “I feel like it’s just right.” This sentiment was echoed by others in that group.

**“Before I was placed into reading class, I really didn’t know how to read ... whenever I would read out loud to the class, people looked at me and said ‘How do you not know how to read that’? And then when I do this, Sounds-Write, it really did let me build my mindset and be able to know that I’m doing things correctly.
—Grade 7 student**

Students in two additional focus groups expressed mixed perspectives. In one group, a student described the activities as easy, while another found them more appropriate, noting, “It’s okay, because some words can be a little hard.” In the other group, one explained, “Sometimes it could [be easy], but I understand that she’s trying to help us learn, especially if English is not your first language.” These perspectives suggest that students at times experienced challenging instruction and at times unchallenging.

Finally, participants in the remaining two student focus groups, both Tier II groups, one of which was in grades 4-5 and one of which was in grade 7, reported SLP instruction felt too easy for most or all students. These groups of students suggested that the phonics instruction was very easy, and may not have provided sufficient challenge for students to grow in their literacy skills.

**“It just feels like a low grade topic. For me, I feel like it’s way too easy.”
—Grade 7 student**

Despite the range of student opinions on the level of SLP challenge, when asked if they would continue with SLP if they had the choice, most students agreed that they would. Across focus groups, students appeared to enjoy being part of SLP instruction.

What Are the Implications?

Implementation Findings

Taken together, the findings from surveys, interviews, and focus groups suggest that the SLP implementation, while not perfect, was successful. Teachers were trained and coached on SLP and delivered SLP instruction in varying amounts according to school schedules. The average amount of instruction was estimated at about 24 hours per teacher. Teachers reported positive feelings about SLP and largely preferred it to other methods of phonics instruction. Students reported engaging experiences with SLP and felt that it contributed to their learning.

Teachers were largely able to implement key features of SLP consistently, but instruction may have been insufficiently challenging for upper-grade students.

Two barriers to SLP implementation are worth noting. Teachers were strong on certain features of SLP implementation, such as focusing on SLP concepts and using the SLP scripts and pronunciations, but inconsistent on others, such as employing connected text reading and writing and using the “teaching through errors” student oral reading feedback protocols (see Exhibit 3). Connected text reading and writing is a crucial aspect of students’ reading and writing fluency, and future SLP teachers should treat that work as essential. In addition, the “teaching through errors” protocols require not merely understanding the curriculum materials, executing the scripts, and following the scope and sequence, but using the SLP theory to provide calibrated, in-the-moment scaffolding to support students’ word reading no matter what kinds of oral reading errors they make. Future SLP implementations should consider how, over time, to coach teachers in the finer aspects of SLP implementation.

Finally, teachers, and some students reported that SLP was insufficiently challenging, particularly in middle school grades 6-8. Like many phonics programs, SLP is designed to start from the very earliest experiences of children learning to read, but study teachers had to adapt to the needs of older students. Some teachers also spent most of the intervention time teaching monosyllabic words, with little to no polysyllabic word instruction, which may have contributed to some students feeling that the instruction was insufficiently challenging. However, the whole population of study students were below average in decoding and sentence reading efficiency based on ROAR pretest scores. It is difficult to know whether the needs of students required extended monosyllabic instruction, or if teachers’ first time using SLP kept them from accelerating instruction appropriately. Future studies of SLP implementation should consider how to quickly and accurately calibrate the challenge level to upper-grade readers. Good next steps for SLP research would be deeper understanding of assessment and guidance for SLP teachers who want to accelerate progress for middle school readers who may have already had years of non-SLP phonics instruction.

Impact Findings

Considering both the strengths and weaknesses of SLP implementation across all three cohorts, SLP instruction resulted in statistically significant improvements on word reading (ROAR Word) and reading efficiency (ROAR Sentence). This is a notable achievement for Sounds-Write. Statistically significant effects are rarer and meaningful effect sizes are lower for upper elementary and middle school students, compared with their younger K–3 counterparts (Kraft, 2020). Because the combined sample findings for both districts are corroborated with the randomized sample findings for District A, these findings can be viewed as a particularly rigorous test of SLP.

Improved word reading and reading efficiency through SLP can establish a foundation for elementary and adolescent students’ literacy development throughout middle and high school.

Improving students' word reading may support them in bypassing decoding thresholds that might otherwise constrain comprehension through middle and high school. Similarly, efficient sentence reading is an equally important foundational skill to help students handle the increased volume of reading expected of them in middle and high school.

The effect sizes give some indication of the magnitude of the impact of SLP relative to other literacy interventions. According to Kraft (2020), an effect size of 0.16 puts SLP in the 60th to 70th percentile of effect sizes in similarly rigorous reading interventions across the middle grades. Teachers also reported that SLP would be feasible to implement on a larger scale.

One important but perhaps surprising finding of this study was that SLP instruction and BAU instruction were equally effective for improving students' spelling. Even when we dug deeper into the ESI, we did not find that SLP instruction helped students master particular spelling patterns any better than BAU instruction did. However, SLP teachers were somewhat inconsistent in using connected text spelling activities (see Exhibit 3), which may have limited opportunities for SLP students to practice spelling.

Another possible explanation, though, is that SLP's focus on phonology, when compared to BAU approaches with less emphasis on phonology, is better suited to supporting adolescents' word reading than to supporting spelling. For example, District A's BAU curriculum in grades 4–5 was a morphology-based curriculum that used word work through prefixes, roots, and suffixes to support word reading, spelling, and vocabulary. Morphology interventions have also been shown to be effective at improving both decoding and spelling (Goodwin & Ahn, 2013).



Another possible explanation for the spelling results is that the duration of the study—we estimate that an average student received about 24 hours of SLP instruction—may not have been sufficiently long to show significant improvements on the ESI and USI. Meta-analyses of spelling suggest that, while spelling instruction can be effective overall, many studies compare spelling instruction to no-treatment controls (Graham & Santangelo, 2014), and effects are typically small on measures that require students to spell words not taught in the intervention (Peterson & Kromminga, 2024). In addition, spelling research with students in grades 4–8 has, by and large, focused on students with disabilities (Chandler et al., 2025; Peterson & Kromminga, 2024). Because there are few comparably rigorous studies of spelling instruction in grades 4–8, these findings break new ground. Future research should explore the potential intervention duration required to improve generalized student spelling in the middle grades.

We also found that SLP was similarly effective across all student subgroups. This was not surprising: SLP's approach is not designed as a differentiated instructional model. However, interviewed teachers reported that the SLP approach seemed to work particularly well with multilingual students. Instructional models that deliver equitable outcomes and that teachers can use with linguistically diverse students are promising routes toward systemic improvements.

Limitations

A significant limitation of this study is the lack of broader measures of reading and writing, such as vocabulary, reading comprehension, writing fluency, and written composition, which are key indicators of literacy development through adolescence. These measures are more distal to the core work of SLP, and therefore impacts on these measures may be less detectable. Future studies might consider measuring SLP's potential impacts on more distal measures. Foundational skills, after all, are foundational: Improving them may build a more powerful core set of literacy skills that blossom as adolescents have more opportunities to read and write throughout high school. On the other hand, a focus on foundational skills may limit adolescents' opportunities to build vocabulary and disciplinary knowledge that are also necessary for comprehension.

Another limitation is the study's relatively small sample size, which reduces statistical power, limits the precision of impact estimates, and constrains our ability to detect differences across instructional contexts (Tier I vs. Tier II) and student subgroups. While the study included rigorous RCT and QED designs, findings should be interpreted as suggestive rather than definitive. Replication with a larger sample would be needed to more precisely estimate impacts and determine whether effects differ across instructional settings and student populations.

Conclusion

Our study makes a substantial and rigorous contribution to the existing evidence base. Compared to a comparable BAU student, the average SLP student finished 6.4 percentile points higher on ROAR Word and 5.6 percentile points higher on ROAR Sentence. The findings have implications for school systems considering how to improve adolescent word reading and sentence reading efficiency—critical considerations. We also present cautionary evidence: Our analysis suggests that SLP may be similarly effective as BAU approaches at improving spelling in the middle grades.

In theory and in practice, SLP may deliver a more efficient, powerful, and flexible schema for students to understand how English sounds and spellings work. This schema may compound as students are exposed to rarer sound and spelling patterns in increasingly complex texts in middle and high school. Our short-duration study is just a start. Future studies can verify whether SLP delivers on that promise. For now, we present these findings as a hopeful contribution to the national and international conversations about how to bring the power of literacy to every child in every classroom.

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