



Five Strategies
for an

**EFFECTIVE
LITERACY
Intervention Plan**



LINDAMOOD-BELL
LEARNING PROCESSES

Introduction

Since 1986, Lindamood-Bell has provided professional development for educators and collaborated with school systems to increase student achievement. As an industry leader in literacy interventions, we have helped struggling readers, including students with dyslexia, improve reading skills.

Through our partnerships, we've learned lessons and identified strategies to implement successful literacy initiatives: Our partnerships have demonstrated significant results in reading growth and achievement, maintained high-quality instruction and program fidelity, been brought to scale, and sustained over time (Sadoski & Willson, 2006; Lindamood-Bell, 2017, 2021). The following are strategies to help district and school leaders implement a comprehensive literacy initiative, including targeted interventions for struggling readers and students with dyslexia. Each strategy includes specific tips and takeaways that school leaders and teachers can begin discussing or implementing immediately.

Five Strategies for Success

1. Teach Reading Based on the Cognitive Science of Learning

Evidence-based reading research is clear on what are the essential component parts of reading (National Reading Panel Report, 2000). Reading skills consist of **phonemic awareness, phonics, word recognition and fluency, oral vocabulary, and comprehension**. And yet despite decades of research that points to these component parts, which now drive the current discussion and focus around the Science of Reading, students in the U.S. have improved very little in reading over the past 20 years. In 2019, only 35% of fourth graders read at proficiency on the NAEP, and only 34% of eighth graders were proficient (The Nation's Report Card, 2019).

In our practice at Lindamood-Bell, instruction includes not only component parts of reading, but also skills in what the cognitive sciences tell us about how the reading brain works (Sadoski & Paivio, 2001; Pribram, 1971; Stanovich & West, 1989; Ehri, 2020; Wolfe & Bowers, 1999). Reading involves sensory-cognitive processes—that is, the brain takes in sensory information at the auditory, visual and kinesthetic level and integrates those processes required for reading proficiency. ***This process-based approach to reading instruction supports and enhances strategies, methods, and content of current reading practice, including a structured literacy approach.*** Sadoski's and Paivio's Dual Coding Theory (DCT) supports this process: "Dual Coding Theory is the general theory of cognition that provides our unifying framework for literacy"(2001). As Sadoski (2006) describes further, DCT "consists of the independent activity of, or interplay between, two great mental codes: a verbal code specialized for language and a nonverbal code specialized for knowledge of the world in the form of mental images."

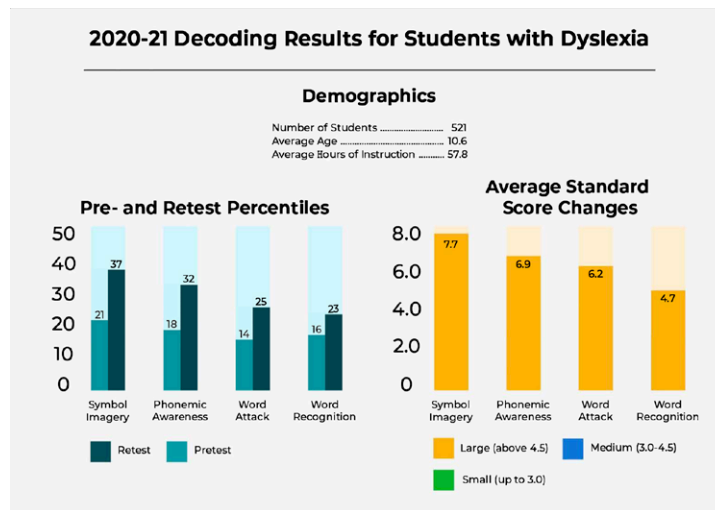
Three primary sensory-cognitive processes associated with reading are phonemic awareness, symbol imagery, and concept imagery (Lindamood, et al., 1997). Following DCT, we reference our approach as the ***Imagery-Language connection*** for reading, which integrates these processes to achieve reading fluency and comprehension. Conversely, typical structured literacy approaches predominantly focus on phonological processing, relying on lots of rules and word study to teach reading with little attention to the cognitive processes that support fluency and independence.

Phonemic Awareness: The ability to perceive and manipulate individual sounds in words. For example, in the word ‘seat’ there are three sounds (phonemes), all different and isolated as /s/, /ee/, and /t/.

Symbol Imagery: The ability to perceive the sounds (phonemes) and letters (graphemes) in words, and holding the phoneme-grapheme connection in visual memory. For example, creating a mental representation of the four letters that make up ‘seat’ including the spelling pattern ‘ea’ for the phoneme /ee/.

Concept Imagery: The ability to create an imaged gestalt (whole) from oral and written language, which serves as a basis for recall, comprehension, and higher order thinking. For example, visualizing the concept of the word ‘seat.’

The imagery-language connection is often a critical missing piece for struggling readers. Research with the most disadvantaged readers shows that with systematic and explicit instruction in these sensory-cognitive processes, the brain does “rewire” itself in developing the processes needed for reading (Huber, et al., 2018). Evidence from this and other studies show that dyslexia is not a permanent, life sentence. A recent [case study](#) (Lindamood-Bell, 2021) from Fort Smith Public Schools in Arkansas also shows students with dyslexia can become proficient in reading skills and close the gap.



Tips and Takeaways

How can specialists, classroom teachers, and support staff integrate a process-based approach to reading instruction? Here are three tips:

- Bring imagery to an explicit, conscious level. Use language such as “What is the second sound/letter you see in the word ‘spot?’” or “What did you visualize for the part that said, ‘The huge saguaro cactus thrives in the Arizona desert by storing its own water?’” By directing students to an awareness of their meta-cognitive learning process, they can begin self-monitoring and self-correcting, on their way to independence.
- Use symbol imagery exercises to develop phonemic awareness and orthographic mapping. These strategies direct students to manipulate sounds and letters in words.

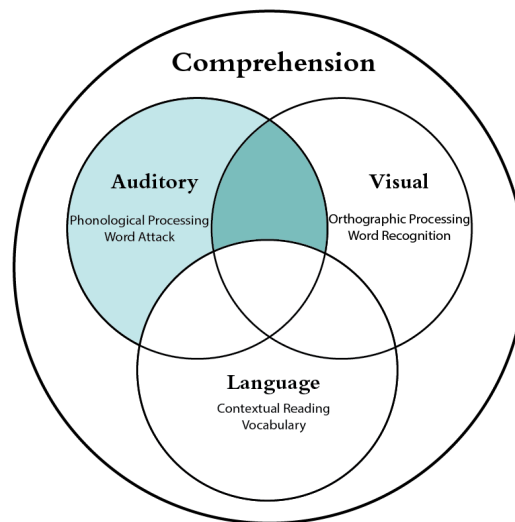
Activities include: 1) identify a specific sound/letter in a word, 2) substitute a sound/letter, 3) add or omit a sound/letter, and 4) shift sounds/letters: e.g., change ‘flaps’ to ‘flasp.’

- Teach/reinforce new vocabulary with imagery. For example instead of asking “What is the meaning of the word photosynthesis?” instead ask “What do you picture for photosynthesis?” Then help students develop detailed imagery for the word for understanding and recall.

For free resources and samples of our instructional approach, look inside our [Toolkit for Educators](#).

2. Provide Differentiated Instruction

While differentiation is an effective strategy in meeting all students’ needs, interventions are often designed with a “one size fits all” approach. Students with poor phonemic awareness skills may receive the same scripted program and follow the same scope and sequence, or students in special education may receive the same dosage of instruction. Neither scenario is likely to provide the most effective, differentiated instruction for all students. Instead, schools should strive to pinpoint the component parts of reading where individual students need the most focus, such as identifying and prioritizing the skills in the venn diagram below:



As in the example above, some poor readers may have adequate phonemic awareness skills but limited sight word proficiency, impacting fluency and comprehension. Instructional strategies here should prioritize reinforcing word recognition skills, not spend more time on phonological awareness tasks.

Differentiated instruction is also diagnostic and responsive. This requires not only progress monitoring, but also formative assessment. Real-time formative assessment is a process that enables educators to monitor student response on a day-to-day basis, and make instructional modifications to the lesson plan that match specific students’ needs. Formative assessment has been shown to produce large learning gains, especially among low performing readers (Black & Wiliam, 1998).

Through a [school improvement initiative](#), Haskin Elementary School in Colorado (Lindamood-Bell, 2017) implemented a Turnaround/Transformation model to address chronic levels of low literacy. The district's transformation team used standardized, diagnostic tools to pinpoint instructional needs (e.g., phonemic awareness or fluency or comprehension) and then to group students accordingly. Instructors then utilized formative assessment data to adjust lesson plans based on the response and progress of each student. If necessary, students were regrouped to better match their skill development through the scope and sequence of the program. By differentiating instruction in specific skill sets, the school significantly outperformed comparison schools in the area of reading growth.

Tips and Takeaways

What does effective differentiated instruction look like? Here are three areas for consideration and discussion:

- Group students homogeneously. Are you grouping students for targeted intervention based on scheduling availability rather than instructional needs? Interventions should be designed to identify specific reading skills and create groups with similar abilities and skill development needs. This allows you to pace students along a similar progression of development, while focusing on the same target areas.
- Identify a separate weakness in comprehension. The simple view of reading is not sufficient for all learners. Many students struggle to understand what they read or to get the main idea despite adequate decoding and oral language skills. Do you have adequate assessment data to determine which students need targeted intervention in comprehension skills only? This includes reading and listening comprehension.
- Formative assessment: 1) Use student responses, especially errors, as opportunities to guide new learning and modify lesson planning. To maximize student progress, lessons should not be scripted based on a set scope and sequence. 2) Use Socratic questioning to guide students in their learning. Use differentiated questions with substantial, moderate, or light support, depending on where each student is in their level of development and knowledge. 3) Respond to the student's response by helping them analyze their response, and guide them with corrective feedback. This fosters their ability to self-monitor, leading to self-correction and independence in their learning behavior. See examples below.

Example 1: A student reads the isolated word 'steam' for the word stream. Cover the word and ask "When you say 'steam,' what sound/letter do you hear/see after the 't'? Then compare their response to the stimulus to see if they can self correct.

Example 2: A student reads a sentence as: "The salmon laid her eggs in the steam." Ask the student, "Does that make sense? What do you *picture* for steam?"

3. Ensure Interventions are High-Dosage

Along with differentiated instruction, high-dosage, intensive intervention has shown to be a critical component in remediating reading difficulty and closing literacy gaps (Sadoski & Wilson, 2006). Focusing on specific skills while increasing instruction time accelerates the

learning process, allowing students to more quickly close achievement gaps.

Targeted intervention, with increasing intensity, is part of a multi-tiered system of supports (MTSS) model. Typically, schools think of intensive intervention as Tier 2 or Tier 3 support. Since students also spend most of their time in the regular classroom environment, the role of classroom teachers (Tier 1) must also be included as part of the overall “system of supports” for students who need more instruction. This framework of intensive intervention is widely implemented to identify and support all students, whether special education or general education (St. Martin, 2020).

Intensifying instruction is one strategy, but to be effective, interventions should also focus on depth of skill development. Often, interventions try to do too much too quickly, and are not high dosage. Many supplemental or remedial interventions try to address components of a structured literacy approach all at once and whether students need attention in all areas or not. Students get a little bit of instruction in a lot of skills, but may struggle to reach levels of independence in any one area.

Another reason interventions lack intensity is the schedule. Students in special education resource rooms may only receive two or three doses of instruction per week, often for as little as 20 to 30 minutes each session. Struggling readers and students with dyslexia need sufficient instruction time. Interventions must be prioritized for daily instruction (or nearly daily) and for a minimum 45–60 minutes per day (typically Tier 2). For students with more impaired reading skills, a minimum of 90 minutes or more should be considered (Tier 3). Students need time for multiple opportunities for skill development. Repeated practice and instructional routines are critical in developing the cognitive pathways associated with the reading brain. Evidence has shown that students in special education, including those with dyslexia, can be remediated and can read with proficiency. School and district leaders can facilitate this by setting high expectations for these students and their instructors and establishing a learning environment for them to succeed.

In [Pinellas County Schools](#), Florida, the district recognized the need for high dosage interventions for struggling readers. They created a Center for Literacy Innovation, focusing on the science of reading and remediation. Many of their students were identified with, or at risk for, dyslexia. By restructuring their learning environment with the literacy center, students were able to get the intensity they needed to improve. Students improved from the 14th to the 50th percentile in phonemic awareness, while comprehension increased from the 23rd to the 24th percentile.

Tips and Takeaways

Here are three lessons learned for increasing the intensity of instruction:

- Create multiple opportunities for practice. Scheduling and lesson plans should accommodate activities where students have repeated practice in specific skills, to increase accuracy and fluency. Watch for interventions that are limited in time or are light-touch, with few opportunities for practice.
- Schedule small-group and one-to-one intervention. Intensity can also be realized

with small group sizes (e.g., two to five students) and if necessary, with one-to-one instruction. While this may require more instructional resources in the short term, the instructional cycle may be decreased in the long term, while experiencing an acceleration of learning.

- Offer high dosage tutoring. Tutoring programs have been shown to increase reading skills (Ed Covid-19 Handbook, 2021). Tutoring also enables schools to intensify instruction for students who need more time in skill development. Innovative schools have trained their staff or hired outside tutors for after-school instruction and summer school sessions, aligned with their current intervention. Additionally, schools maximize staff resources by offering high quality training for support staff and paraprofessionals.

4. Implement Sustained, Job-Embedded Professional Development

Our work with schools includes system-wide improvement initiatives and closing achievement gaps for underperforming subgroups of students. A critical factor to address these goals involves strategic levels of ongoing professional development (PD) where staff receive initial training and ongoing support to improve the quality of instruction. Evidence shows teacher competency has a larger impact on student achievement than factors such as minority or socioeconomic status (Darling-Hammond, 1999).

Teaching reading *is* rocket science. Evidence does highlight key characteristics of PD activities that improve student learning. Teachers must have frequent opportunities to observe high-quality lessons, to co-teach with a program expert, and to receive feedback within a continuous cycle of improvement. Activities should be organized and purposeful while focusing on improving practice in the specific content and pedagogic knowledge of the program or intervention. Overall, professional development activities should include 30 or more contact hours (Guskey & Yoon, 1999).

In our levels of professional learning, districts and schools can strategically manage scheduling and resources while scaling up interventions more effectively. Level 1 workshops provide the foundation of the program steps and practice, while Levels 2 and 3 offer ongoing follow-up activities (on-demand and in-person) where staff can participate at their own pace and focus on instructional areas that match the needs of their students.

Tips and Takeaways

Consider these professional development strategies to improve instruction:

- Ensure job-embedded coaching. Plan for structured and purposeful coaching sessions with an expert in the content you are focused on. The expert coach should follow a model of “I Teach, We Teach, You Teach” during actual instruction sessions with students, where the coach gradually turns over more responsibility to the teacher as the teacher improves in their instructional skills in a new intervention. Start with a minimum of one coaching session per week during the first part of the school year, and then scale back as teachers become more autonomous, with program fidelity. Coaching can be provided in person, or virtually if content experts are offsite.

- Schedule ongoing PD activities. Through our levels of professional learning, we collaborate with schools to establish follow-up support activities so teachers become highly competent in the science behind reading instruction. These activities should be highly structured and intentional, with specific times built into the calendar to complete.
- Summer institute: Re-imagine the typical ESY summer school session as a high-quality, professional development institute. Activities can be focused around workshops, job-embedded coaching, PLCs, and advanced training sessions. The intensity and focus on one program or intervention allows staff to gain immediate, hands-on experience with guided support while students receive high-impact tutoring.

5. Develop a Shared Leadership Vision

Our experience in implementing effective literacy plans highlights the critical role of leadership, both at the district and school level. In many ways, the leadership factor underlies the effectiveness of strategies 1 through 4 above. This has been evident in school and district-wide initiatives (Sadoski & Wilson, 2006; Lindamood-Bell, 2017).

Successful plans start with engaging all stakeholders in the plan and lining out specific roles and expectations for the initiative to succeed. Stakeholders should include department heads, supervisors, principals, school board members, instructional specialists, and other key staff involved in the intervention plan. For example, will building principals be expected to monitor program fidelity and help to facilitate solutions to improve student learning? Will curriculum or staff development directors evaluate key indicators and then create opportunities for ongoing professional learning and quality instruction? How will communication flow among stakeholders to maintain focus on key objectives and implement a problem-solving process?

Another key characteristic is instructional leadership. Unfortunately, as school reformer Richard Elmore (2008) noted, “direct involvement in instruction is among the least frequent activities performed by administrators of any kind at any level...” When leadership at all levels have an understanding and skill set of the intervention content and science, they 1) set the tone (vision) that they expect the literacy initiative to be a top priority, and 2) have the ability to evaluate instructional practice and offer solutions for improvement—instructional leadership.

Finally, a shared leadership vision must establish high expectations for all students, including disadvantaged learners and students with disabilities such as dyslexia. High expectations focuses stakeholders on a commitment to quality instruction and fidelity of the intervention program.

Tips and Takeaways

Consider the following when planning for an effective literacy intervention:

- Think longer-term. Often literacy plans and PD decisions are made year to year, based on current student achievement data and funding resources. This makes it difficult to scale up and sustain initiatives over time. Instead, start with a minimum three-year plan that can be effectively monitored and managed from year to year. For example, in Year 1, start with a smaller group of staff to “pilot” the intervention,

and focus resources and support on them to ensure fidelity to the program. In Year 2, add more staff, and use your experienced Year 1 staff as mentors and facilitators to help expand the program. Evaluate your progress and needs and make necessary adjustments for Year 3.

- Create a “Leadership Institute.” Foster a system-wide culture of instructional leadership by requiring key district leaders and building principals to participate in program workshops and other literacy PD activities. Create a rubric for instructional “Look Fors” so leaders can better monitor the effectiveness of the intervention plan.
- Collaborate. Literacy initiatives, staff development, and programs often remain siloed in specific departments or areas of expertise, with little or no collaboration. With a shared vision of leadership, collaboration among all stakeholders allows schools to maximize resources and work more efficiently. Encourage regular updates and communication between regular education and special education staff members, to better identify and meet student needs and to improve instructional quality.

Conclusion

These five strategies provide an evidence-based framework for improving literacy skills for struggling readers. Successful literacy interventions can be brought to scale, sustained with fidelity, and benefit all students regardless of background or ability level.

To learn more about Lindamood-Bell case studies in schools, visit <https://lindamoodbell.com/school-results>.

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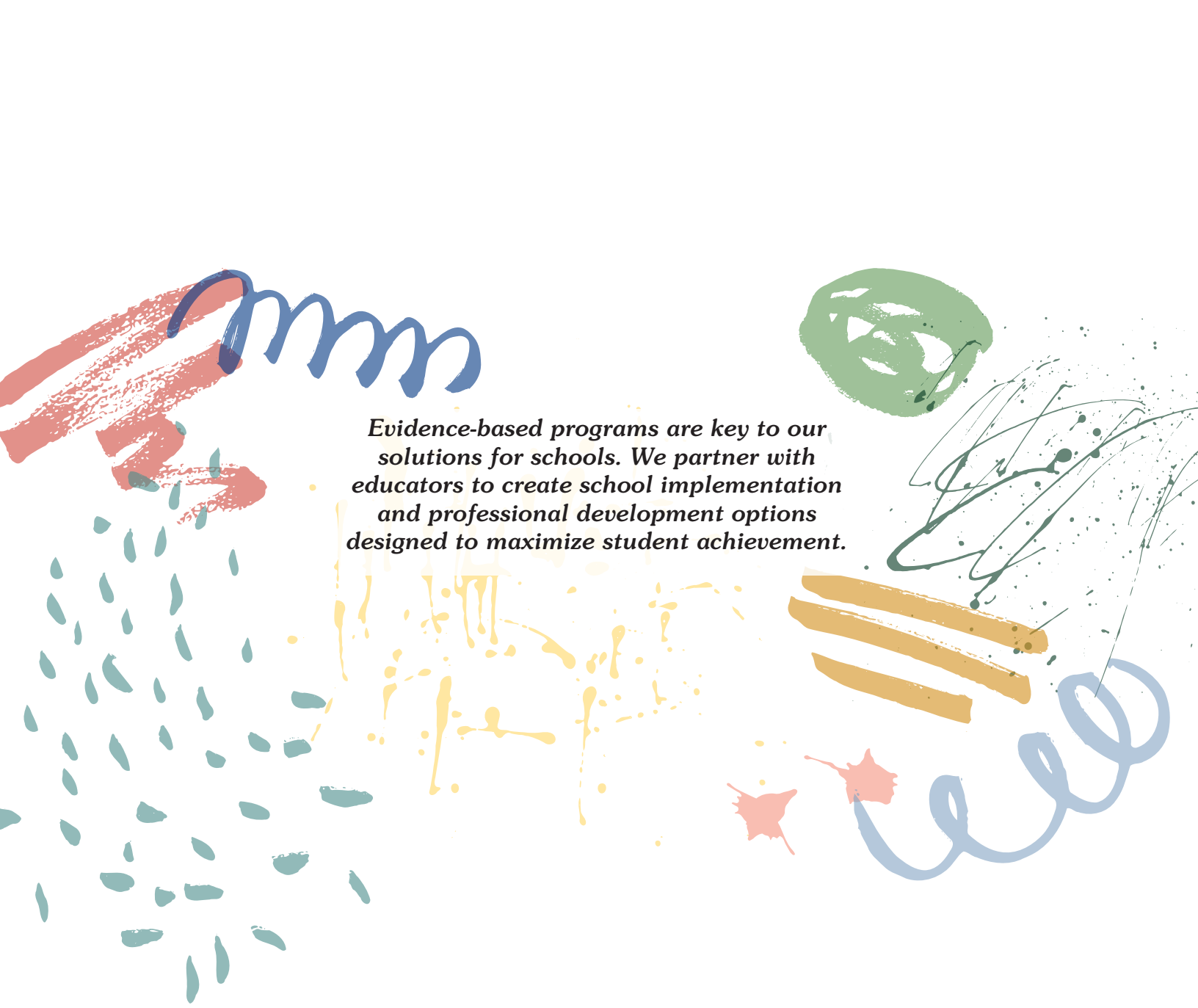
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Evidence-based programs are key to our solutions for schools. We partner with educators to create school implementation and professional development options designed to maximize student achievement.



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