

# **Know Better, Do Better: Enhancing K-3 Students' Early Literacy Skills Through Professional Training**

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## **Abstract**

Educational reform over the past several decades has consistently had the same goal, to close the achievement gap or large academic disparities that exist amongst students. Recently, national trends and revised English-Language Arts (ELA) standards across the United States have shifted to promoting foundational skills and science-aligned approaches which require PK-12 teachers to be prepared to integrate and provide scientifically based strategies to support students in learning how to read. These shifting landscapes have left district leaders evaluating current curriculums and seeking professional development opportunities that are more aligned with scientific findings and evidence-based practices. To better understand the outcomes or effects of the workshop, authors used a convergent parallel mixed methods design. The findings show that the early literacy workshop's format and content significantly impacted teachers' knowledge and perceptions of the important role that foundational skills play in developing skilled readers. As others look to develop professional training that mirrors the effectiveness of this one, they must thoughtfully consider the structure, application and the culture of the experience.

## Introduction

Educational reform over the past several decades has consistently had the same goal, to close the achievement gap or large academic disparities that exist amongst students. These disparities have contributed to constant efforts to advance educational approaches and increase student performance. Though concerted efforts have been made, American students' reading abilities have shown minimal improvement over the years with one in three children not reading at the basic level of comprehension (NAEP, 2022). This inability often results in lower levels of educational attainment, lower income levels and social or public health concerns (McLaughlin et al., 2014). These undesired results are likely linked to these students not having the proficient skills to be successful in our 21st century society.

As national trends and revised English-Language Arts (ELA) standards across the United States shift to promoting foundational skills and science-aligned approaches, PK-12 teachers need to be prepared to integrate and provide scientifically based strategies to support students in learning how to read. The science of reading (SoR), an interdisciplinary body of research focusing on how children learn to read, outlines a sequential progression of skills that specifically emphasize the importance of phonological and phonics instruction to ensure young students obtain literacy proficiency. This shift in instruction and legislation requires teachers to provide more explicit instruction in print concepts, phonological awareness, phonics, and fluency, and for school districts and leaders to provide more systematic early literacy training based on scientific findings. When teachers have adequate training and knowledge of early literacy foundational skills, they make more informed instructional decisions and dedicate more instructional time to these components than their peers who do not have the same knowledge and training (Spear-Swerling & Zibulsky, 2014). This results in higher gains for students in classrooms with well-equipped and trained teachers (Piasta et al., 2009). While reports show that undergraduate programs are more adequately addressing scientifically based reading instruction than they were a decade ago, graduate program coverage is stagnant (National Council on teacher quality (NCTQ) 2020). So, while there are more teachers entering the field better equipped to teach reading, there is a gap in the knowledge of in-service teachers who did not receive the same level of training and preparation. How should training be administered? What tactics strengthen knowledge and perceptions? This article outlines the collaborative effort between an urban metropolitan institution and local area school districts to facilitate in-service teacher training and implementation of science-aligned strategies to enhance foundational skills instruction.

## Understanding the “Shifts” in Instruction and Legislation

### *Shifts in Mandates*

Prior to legislative mandates, many curriculums, state standards and teacher philosophies embodied a balanced literacy approach. This approach relies heavily on comprehensive instruction grounded in teacher choice and professional judgment (Wexler, 2019). Teachers are encouraged to have many tools in their toolbox and use the methods that they think are most appropriate and responsive for the students they are working with. One common practice in balanced literacy is guided reading. Using this approach, students read books at their instructional level and the teacher provides prompts and cues that direct students to use pictures and context, in addition to looking at the print, to guess the unfamiliar word. In recent years this approach has faced scrutiny in building skilled readers (Shanahan, 2012; Schwartz, 2021). Findings indicate that an explicit, systematic approach to build students’ word recognition skills is most effective in teaching students how to read (Ehri, 2020; Lindsay, 2022). It is also believed that limiting students to books within their instructional level can widen the achievement gap or what Wexler (2019) refers to as the “knowledge gap”. With the “shift” to an explicit, systematic approach to build foundational skills, SoR provides a scientifically grounded framework that pinpoints reading challenges and provides strategies for effectively addressing them.

### *Shifts in Philosophy*

SoR is grounded in the work of Gough and Tunmer (1986), a formula demonstrating that reading has two basic components: word recognition (decoding) and language comprehension. See Figure 1. This approach promotes that teachers must teach students to decode words accurately and automatically while also providing students with knowledge rich experiences to develop sufficient language comprehension abilities. Much like a multiplication problem, if one of the components is not developed, or a zero, sufficient reading comprehension will not develop.

$$D \quad \times \quad LC \quad = \quad RC$$

(Decoding Skills) X (Language Comprehension) = (Reading Comprehension)

**Figure 1.** The Simple View of Reading vs. The Two Components of Reading

### ***Shifts in Legislation***

As the conversation evolves around effective literacy instruction and the need for foundation skills instruction in the early grades, so does legislative involvement. Thirty-eight states across the US have enacted laws that mandate evidence-based curriculum and teaching training aligned with the science of reading (Schwartz, 2024). Some states have even gone to the extreme of prohibiting guided reading systems in schools. In our state, schools are required to identify students performing below established thresholds and provide science-aligned interventions. Our state mandated that teacher preparation programs embed science-aligned reading and writing strategies, and the state school board has issued a statement encouraging districts to promote high-quality early literacy instruction based on the science of reading (The Reading League, 2024). These shifting landscapes have left district leaders evaluating current curriculums and seeking professional development opportunities that are more aligned with scientific findings and evidence-based practices.

### ***Shifts in Approach***

Embedded in the SoR approach is a focus on building the foundational skills necessary to read proficiently. Through a structured, applied learning framework, each of the foundational skills, print concepts, phonological awareness, decoding and fluency, work together to help the student read words accurately and effortlessly. Explicit, systematic instruction in these areas is critical in the early grades so that students become proficient readers by grade 3.

By incorporating applied learning into educational practices, teachers can create more engaging and relevant learning experiences for students. Applied learning is a pedagogical approach that emphasizes the practical application of knowledge and skills in real-world contexts (Schwartz & Bransford, 2020). It moves beyond traditional rote learning to foster critical thinking, problem-solving, and creativity. The structure applies to all learners, including teachers.

While many states have sought out national training models and resources, asynchronous structures can create challenges for both engagement and retention of materials. While online structures allow flexibility and teachers to establish larger teaching networks, the ability to design content and training that meets teachers' needs and align with their specific curriculum materials and resources are barriers to engagement and classroom application (Creemers et al., 2012). Training must be designed to facilitate a learner's comprehension and internalization of the material. To achieve this, content should be interactive, varied in format and easy to navigate (Heydari et al., 2019). When these components are not addressed,

lower levels of engagement often yield lower completion rates (De Freitas et al., 2015; Ericson et al., 2016).

### **Our University Response**

Our institution is centered in a midwestern metropolitan city surrounded by 12 local area school districts. Monthly, literacy faculty and district literacy leaders meet to discuss progress made with state literacy initiatives and implementation of science-aligned practices. Though the state has recognized national professional learning opportunities for educators, the cost, structure and time required of those opportunities has proved difficult for local districts. District literacy leaders sought more hands-on, in-person opportunities for teachers to gain knowledge and develop understanding of science-aligned approaches to teaching reading. This need led to the development of the Early Literacy Workshop. The goal of the workshop was to align teachers' knowledge and instructional practices with the decades of research on how students learn to read.

### **The Workshop Model**

The Early Literacy Workshop contained five 3-hour in-person, collaborative sessions designed to develop teachers' knowledge and instructional practices focused on foundational skills over the course of a 15-week semester. Each session focused on a different foundational skill providing participants with both theory and applicable strategies for classroom use. After topics were explored collaboratively at in-person sessions, participants individually completed an online learning module connected to the designated skill and content objectives. Each module consisted of knowledge building activities and opportunities to create classroom resources featuring a home to school connection. Three of the sessions focused on print awareness, phonemic awareness, and phonics.

#### ***Print Awareness***

This session communicated the important role that students' print awareness has on their development as skilled readers. Participants explored the four domains of print awareness and enhanced their ability to identify effective components of print focused read-alouds. Participants were tasked with creating print focused read-alouds with rich salient texts currently used in their classroom and developed resources to increase print awareness in home environments.

#### ***Phonemic Awareness***

This session aimed to help participants understand the relationship between phonemic awareness and reading proficiency. Participants explored the dimensions and developmental progressions of phonemic awareness and engaged with multi-sensory strategies to build students' phonemic

awareness. Participants constructed a 5-day plan to address a state standard connected to phonemic awareness and created an at-home resource to support caregivers in reinforcing this skill development in the home environment.

### ***Phonics***

This session examined the relationship between phonics knowledge and word recognition skills. Participants uncovered the phases and developmental progression of word reading and identified favorable decoding approaches to supporting students with weaknesses in working memory and/or processing speed. Participants explored the components of explicit phonics lessons and wrote a plan for using decodable text in the classroom to enhance students' application of phonics knowledge.

### **Workshop Participants**

Prior to the workshop, faculty hosted online informational sessions to provide educators with workshop dates, structure, and expectations. Participants were selected in the order their interest form was received. Twenty-nine educators from across six local area school districts were selected to participate in the workshop. One participant was male and twenty-eight were females. This is representative of the teachers within the state. Participants ranged in years of experience and district role See Table 1.

<b>Years of Experience</b>	<b># of Participants</b>
0-5	5
6-10	3
11-15	4
15+	17

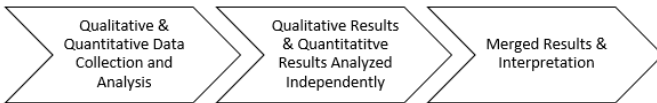
  

<b>District Role</b>	<b># of Participants</b>
K-6 classroom teacher	16
Instructional Coach	3
ESL Teacher	3
SPED Teacher	2
Reading Specialist	3
Did Not Report	3

**Table 1.** Demographic Information

## Methodology

To better understand the outcomes or effects of the workshop, the authors used a convergent parallel mixed methods design (Creswell, 2013). Given this was the initial workshop, the authors wanted to better understand how the workshop impacted teacher knowledge and perceptions. This approach provided the opportunity to collect qualitative and quantitative data in tandem, analyze it separately, and then merge the results for a clearer understanding. See Figure 2. With the desire to build teachers' understanding in how these skills are interconnected to foster fluent reading, the authors analyzed teachers' perceptions and knowledge growth in concepts of print, phonemic awareness and phonics.



**Figure 2.** Convergent Parallel Mixed Methods Design

### *Quantitative Data*

To address teacher needs, the authors conducted a paired-samples t-test to determine the effectiveness of the workshops' implementation and if it increased participant self-perceptions of their overall knowledge and understanding of how early readers develop. The authors also looked at frequency counts of responses identifying knowledge in connection to phonics and decoding, phonemic awareness, and concepts of print to determine if any other information could be provided.

### *Qualitative Data*

For the qualitative data collection, the authors used an open-ended survey to gain additional information as to how participant knowledge had grown in relation to phonics and decoding, phonemic awareness, and concepts of print. The authors used systematic thematic coding procedures to extract themes with a high degree of occurrence (three or more), and then broadened codes to find similar constructs (Azizi & Ismail, 2023; Patton, 2002). The authors further reviewed qualitative responses using the same methodology to determine what aspects of the workshop participants found most useful.

## Results

### *Quantitative*

Data analysis utilized SPSS for the paired samples t-test and descriptive statistics. Quantitative results indicated there was a significant difference in the scores prior to the workshop ( $M=3.47$ ,  $SD=0.68$ ) and after ( $M=4.38$ ,  $SD=0.56$ ) workshop implementation;  $t(29)=6.68$ ,  $p=1.5e-7$ . The observed

effect size was large (1.24) indicating that the magnitude of the difference between the average and  $\mu_0$  is large. These results suggest the workshop had a positive effect on teacher perceptions of their overall knowledge and understanding of how early readers develop. To better understand this outcome, the authors disaggregated the data into individual components. Session topics were embedded within each of the components. See Table 2 for disaggregated participant perceptions.

<b>Concepts of Print</b>			
	Pre	Post	Percent Change
Excellent	10.00%	<b>68.97%</b>	58.97%
Good	73.33%	<b>27.59%</b>	-45.75%
Fair	16.67%	<b>3.45%</b>	-13.22%
Poor	0.00%	<b>0.00%</b>	0.00%
<b>Phonemic Awareness</b>			
	Pre	Post	Percent Change
Excellent	20.00%	<b>72.41%</b>	52.41%
Good	66.67%	<b>24.14%</b>	-42.53%
Fair	13.33%	<b>0.00%</b>	-13.33%
Poor	0.00%	<b>3.45%</b>	3.45%
<b>Phonics</b>			
	Pre	Post	Percent Change
Excellent	10.00%	<b>68.97%</b>	58.97%
Good	76.67%	<b>31.03%</b>	-45.63%
Fair	13.33%	<b>0.00%</b>	-13.33%
Poor	0.00%	<b>0.00%</b>	0.00%

**Table 2.** Disaggregated PArTicipant Perceptions Post Workshop.

It appeared initially that participants grew the most in phonemic awareness, but upon a closer look, it is clear participants came in with the most confidence in this area. One participant decreased. Overall, there was a steady increase, and the workshop had a positive effect on teacher perceptions.

### *Qualitative*

Authors analyzed participant perceptions of knowledge growth in the concepts of print, phonemic awareness and concepts related to phonics. Overall, participants also noted the expanded repertoire of strategies and planning more mindfully. These included types of strategies, how to be intentional and explicit, to include integration across subject areas and better understanding what is developmentally appropriate. Additionally, the



concepts gained also validated teacher knowledge and helped teachers identify misconceptions in a safe space. *“I feel as though I was validated in a lot of ways throughout this workshop.”* Another noted, *“I had some misconceptions about environmental print. This workshop also made me more aware of how I can guide students to look at the print within pictures, the punctuation marks used, and the type of print or direction of the print that the author used.”* One noted, *“[I have] a better in-depth understanding of those skills and being able to explain to parents and teachers with confidence.”* Another said, *“[I now have] validation that explicit phonics instruction is critical for all students.”*

**Print Awareness.** In the areas of print awareness, participants noted the importance of read-alouds at all ages. One participant noted, *“I learned the concept of a print-focused read-aloud is a low investment, high-yield strategy.”* Another stated, *“I learned a lot about how important it is to do print-focused read-alouds. I knew this was important, but I definitely learned more about it and how important it is in developing foundational skills.”*

**Phonemic Awareness.** In the area of phonemic awareness, participants noted better understanding the importance of it and the need for early intervention. Some noted better understanding the difference between phonemic awareness and phonics.

*“My knowledge around phonemic awareness was strengthened during this workshop. I have more resources that show how identifying phonemic awareness struggles early is necessary and that early intervention can help reduce reading difficulties in the future.”* Additionally, *“students need a true understanding of phonemic awareness if they are going to be successful when connecting it with graphemes to decode.”*

**Phonics.** Participants noted the importance of morphology and phonics rule patterns in connection to phonics and decoding. Specifically, understanding the specific scope and sequence of phonics instruction.

*“I learned a few more “rules”. These are so fascinating to me. I love learning more about phonics and I’ve found that kids do too. I also learned a lot about morphology. Morphology is the area I still need to work on. I need to develop better lessons in morphology and this is an area that I still struggle a little with.”*

Participants also shared how the strategies benefited and supported their own understanding. *“I learned about continuous vs. stop consonant sounds and how starting with continuous sounds can help a student blend the sounds continuously.”* Another stated, *“I really thought that English was just a really hard, irregular language. I have never analyzed as deeply as*

*we did in this course. Through this course, I learned that there are quite a few patterns even within irregular words. I also learned a lot about the "rules" of English that I didn't know."*

Additionally, we asked participants what aspects of the workshop were most useful in supporting their knowledge development. Participants noted three main themes related to the structure, the application, and the culture of the environment. See Table 3 for key ideas and participant quotes.

<b>Key Ideas</b>	
Structure	<ul style="list-style-type: none"> <li>● Learning from experts</li> <li>● Research-based approach</li> <li>● Varied structure that included readings, webinars, hands-on activities, and professional book studies</li> </ul>
Application	<ul style="list-style-type: none"> <li>● Hands on learning opportunities</li> <li>● Multiple strategies explicitly shared and practiced</li> <li>● Timing allowed for practice in between sessions</li> </ul>
Culture	<ul style="list-style-type: none"> <li>● Collaborative space</li> <li>● Enjoyed working with multiple district participants</li> <li>● Participants felt validated and that it was ok to be vulnerable and admit misconceptions</li> </ul>

**Table 3.** Useful Aspects of the Workshop.

As Table 3 showcases, the workshop's structure was highlighted as an important element. Specifically, the timing provided time for practice in between. *"I think having our sessions spread out (unlike a one-week summer class) was extremely beneficial."* Additionally, homework in between was designed with direct application implied. *"Preparing materials for families was an unexpected and good challenge."* In addition, it offered voice and choice through varied methods. One participant said, *"I appreciated that the assignments were varied - webinars, articles, podcasts, book chapters, etc."* Another stated, *"I loved that we were able to make choices in some of our assignments that would pertain to us in our current positions."*

Further, the structure and application *"wasn't just a sit and get, instead we actually saw the activities in action, but also weren't treated like children. I appreciated being talked to like the professionals that we are and having time to collaborate with so many amazing educators from around the metro."* This connection established a culture within the workshop that allowed for vulnerability. *Participants spoke to the learning that was needed. "I need to challenge myself and continue to push forward to learn best practices to provide my students with instruction that builds their foundation and pushes*

*them to their highest level.”* Another noted, *“I didn't rank myself higher on this survey only because I have not had an opportunity to implement the things I've learned yet. Next school year will look very different for me, and I will be able to bring this new knowledge to the forefront of my classroom.”* Overall, valuable aspects included the workshop's structure, the application of the strategies shared, and the environment's culture.

### **Findings & Implications**

The findings show that the early literacy workshop's format and content significantly impacted teachers' knowledge and perceptions of the important role that foundational skills play in developing skilled readers. As others look to develop professional training that mirrors the effectiveness of this one, they must thoughtfully consider the structure, application, and culture of the experience.

#### ***Structure***

Participants discussed that the variance in learning structure and the variety of activities facilitated strong learning opportunities for them. Learners are more active and engaged in their courses when they interact with the course content through different modalities, with their peers, and their instructors (Lear et al., 2010). This engagement and design will more likely maintain their desire to learn and feel satisfied with the experience (Banna et al., 2015). When designing professional training, be intentional in incorporating different learning modalities, offering choice in knowledge building materials and variance in learning tasks. This applied learning approach caters to the different learner preferences of participants which positively contributes to their learning and overall engagement.

It was also discussed that the semester-long structure and hybrid design created space for participants to process the content and consider next steps for application. Just as cognitive load theory, or the inability to retain or attend to new information when the brain is overloaded, is often discussed with developing readers, facilitators must implement a structure that provides processing time and individualized application of content. This applied learning structure enhances problem solving encouraging the development of higher-level thinking (Dewey, 2020). The hybrid design of the workshop enabled learners to engage in meaningful discussions and hands-on opportunities with the content while also enjoying the flexibility in other course components for content delivery. Honoring the diverse needs of participants as well as their desire for the content to be personalized and specific to their needs will increase the likelihood that participants will meet the learning experience's intended goals and objectives (Shirky, 2015).

#### ***Application***

Application is where the learning sticks so creating hands-on opportunities to explore the content and strategies followed by group reflection and processing is a critical component of any successful

professional training. The reality is that supporting learners in applying and transferring their learning needs to be deliberate and intentionally planned (Merriam & Leahy, 2005; Roumell, 2019). Though constructing materials and preparing hands-on learning opportunities is often tedious and time consuming, the tradeoff is participants better understanding the content and how they could implement the strategies shared into their own professional context.

Participants' time is valuable, so ensuring that the individual tasks assigned post training are meaningful and applicable to the participants' context is critical. Students interested in the learning content and tasks are more willing to exert effort to achieve their learning goals (Wang et al., 2023). Structuring tasks in a way that encourages the participants to apply the knowledge gained from the training while also honoring the variance in their experiences and positions will likely result in strong implementation and increased retention of the desired behavior or strategy. These opportunities for authentic application set the foundation for the culture of the workshop.

### ***Culture***

The last thing facilitators must consider is how to create a culture that fosters collaboration and vulnerability. As professionals it can be challenging to admit that our current practices are ineffective, yet this vulnerability is essential to professional growth (Brown, 2012; Brown, 2016). It's hard to shift our approach to better meet the needs of our target population when it hasn't been part of our everyday practice. Participants consistently highlighted how valuable collaborating and learning from the experiences of educators from different districts, schools and positions was in their development and understanding of the workshop's goals. When participants' voices are positioned at the center of discussion, their experiences as professionals are validated and viewed as assets in the space. Participants need to know that small shifts can be made to strengthen existing practices. As one participant noted, "I appreciated being talked to like the professionals that we are." This approach supported vulnerability, and a growth mindset as indicated by the participant statement regarding having a "steep learning curve," and needing to "continue to push forward to learn best practices to provide my students instruction that builds their foundation and pushes them to their highest level." When participants experience positive emotions such as enjoyment, interest, and enthusiasm while engaging in learning activities, confidence increases, and they are more likely to have better academic performance and content retention. These positive emotions can enhance motivation and cognitive processes, improving mindset and overall learning outcomes (Fasso & Wright, 2018).

### **Closing**

As states continue to work to enhance the literacy landscape, more training is needed. Workshops providing the structure, application and environment shared above can serve as a stimulus to address one of the most influential factors of student achievement, teachers and teacher training. By creating a space focused on increasing teachers' knowledge and understanding of science- aligned approaches to teaching reading, our state is a step closer to long-term, sustainable change. This study demonstrates that educators at a local level can develop effective workshops on their own without relying on state or national professional organizations to provide training. Implementing workshops locally reduces costs and makes this training more feasible and available to educators.