

2024

How Principals Make Sense of Tensions While Leading a Teacher Professional Learning Initiative: A Case Study of a Districtwide Science of Reading Implementation

Sally J. Zepeda

University of Georgia, szepeda@uga.edu

Salih Çevik

University of Georgia, cevik@uga.edu

Ali Çağatay Kılınc

Karabuk University, cagataykilinc@karabuk.edu.tr

Follow this and additional works at: <https://digitalcommons.library.umaine.edu/jes>



Part of the [Educational Administration and Supervision Commons](#)

Recommended Citation

Zepeda, S. J., Çevik, S., & Kılınc, A. (2024). How Principals Make Sense of Tensions While Leading a Teacher Professional Learning Initiative: A Case Study of a Districtwide Science of Reading Implementation. *Journal of Educational Supervision*, 7 (3). <https://doi.org/10.31045/jes.7.3.2>

This Empirical Research is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in Journal of Educational Supervision by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.

How Principals Make Sense of Tensions While Leading a Teacher Professional Learning Initiative: A Case Study of a Districtwide Science of Reading Implementation

Journal of Educational Supervision

22 – 48

Volume 7, Issue 3, 2024

DOI: <https://doi.org/10.31045/jes.7.3.2>

<https://digitalcommons.library.umaine.edu/jes/>

Sally J. Zepeda¹, Salih Çevik¹, and Ali Çağatay Kılınc²

Abstract

Grounded in sense-making theory, this qualitative study examines how school principals make sense of tensions while leading a teacher professional learning initiative under the broad districtwide instructional reform and the Science of Reading (SoR). This study gathered data from interviews with seven elementary school principals who were implementing a professional learning initiative for teachers under the SoR. The collected data were analyzed through inductive approaches using constant comparative analysis. Data analysis yielded three broad themes: (1) Learning While Teaching: Approaches in Teacher Professional Development, (2) Different Level of Teacher Buy-in on the Instructional Reform, (3) Teacher Accountability during a Reform. We discuss key implications for policy and practice.

Keywords

principal sensemaking; science of reading; teacher professional development

¹ University of Georgia

² Karabuk University

Corresponding Author:

Sally J. Zepeda (Educational Administration and Policy, University of Georgia, 815 College Station, River's Crossing, Room 312. Athens, GA. 30602, USA)
email: szepeda@uga.edu

Introduction

School principals are responsible for securing and sustaining school improvement initiatives and enhancing student academic achievement (Bush, 2018; Day et al., 2016). They are frequently acknowledged as instructional leaders who ensure the competence and growth of their school's teaching cadre by facilitating professional development opportunities (Avalos, 2011; Marks & Printy, 2003). However, professional development paradigms have recently grown more intricate (Kennedy, 2016), presenting principals with greater challenges in fulfilling their roles as instructional leaders in the evolving landscape of teacher professional learning (Zepeda, 2019; Koonce et al., 2019; Mendels, 2012). With the evolving nature of professional learning, school principals are increasingly confronted with uncertainties when adapting to new paradigms; therefore, they find themselves more frequently engaged in the process of sense-making, which entails reinterpreting their institutional practices and understanding to be able to implement reform guidelines (Ganon-Shilon & Schechter, 2017).

A substantial body of research that delves into principals' sense-making of educational reform initiatives revealed that principal sense-making is usually shaped by various factors, including personal beliefs and prior knowledge (Derrington & Campbell, 2018; Gunnulfsen & Møller, 2017), context and social relationships (Timperley, 2011; Tuytens & Devos, 2017), and training and specific reform messages (Rigby, 2015). While principals' sense-making processes are influenced by a blend of cognitive and social factors, this article posits that how individual principals make sense of tensions related to districtwide instructional reform is predominantly shaped by contextual elements within their specific schools.

This study is situated in a school system that implemented the Science of Reading (SoR) framework, concerned with how humans learn to read and how reading should be taught (Goodwin & Jiménez, 2021). Specifically, this study focused on how school principals make sense of leading a teacher professional development initiative related to the SoR. The research questions that guided our study included:

1. What were the key tensions experienced by school principals when leading a teacher professional development program?
2. How do school principals interpret and navigate these tensions in their efforts to lead teacher professional development initiatives?

In the context of this study, "tensions" refers to the challenges, conflicts, or difficulties that principals experience as they try to understand and manage the demands of educational reform.

Literature Review

The section begins with identifying the background of the SoR movement in the United States. Then, we move on to principals' sense-making of implementing an instructional reform. We conclude this section by delving into how principals make sense of leading teacher professional development.

The SoR Movement in the United States

To enhance children's reading acquisition, researchers, educators, and policymakers have conducted comprehensive studies to pinpoint effective teaching methods (Shanahan, 2020; Yaden et al., 2021). The "reading wars" have heightened the need for this research, spotlighting the intense debate over preferred instructional methodologies (Goldberg & Goldenberg, 2022). The argument stands between constructivists, who favor a holistic approach using cues to help learners interpret text (Smith, 1971), and positivists who promote a phonics-centric approach linking the written word to its spoken form (Chall, 1967).

The National Reading Panel (NRP) underscores the necessity of specific skills in learning to read and endorses evidence-based teaching practices that deviate from traditional methods (Duke & Cartwright, 2021). Yet, just a third of students reach proficiency in the National Assessment of Educational Progress (NAEP) reading subtest (Reilly et al., 2019). The SoR pushes for clear and organized instruction in basic reading abilities—phonics, phonemic awareness, vocabulary, fluency, and comprehension—to overhaul reading instruction (Shanahan, 2020), aiming to improve students' reading skill development (Seidenberg et al., 2020).

Extensive literature reviews indicate a consensus regarding the crucial role of reading instruction in societal, academic, and personal advancement. Nonetheless, the translation of this scientific foundation into practice varies significantly at the local level, resulting in a spectrum of teaching methodologies (Drake & Wash, 2020; Shanahan, 2020). There's a notable gap between the solid evidence on reading instruction and its understanding by professionals and the public (Castles et al., 2018; Solari et al., 2020). Specialists highlight the crucial link between letters and sounds in early reading, with phonics instruction as the effective technique for laying this groundwork (Aukerman & Chambers Schuldt, 2021; Drake & Wash, 2020; Seidenberg et al., 2020). However, reading comprehension goes beyond just word recognition (Duke & Cartwright, 2021) and additional facets of reading instruction are sometimes ignored (Castles et al., 2018).

The implementation of SoR is critical in U.S. education, emerging from the influential 2000 NRP report and the No Child Left Behind Act (NCLB) (Thomas, 2022). Despite challenges, like the Reading First scandal and the transition to the Every Student Succeeds Act (ESSA), the NRP's Five Pillars continue to shape reading policies (Goodman, 2008). Parental advocacy for dyslexia has contributed to the rise of the SoR movement, which calls for comprehensive and research-based instruction.

Media figures have also energized the SoR movement, advocating for evidence-based reading practices and challenging outdated approaches (e.g., Hanford, 2019; Johnston & Scanlon, 2021). This activism has led to policy changes, with 32 states and D.C. adopting new evidence-based reading instruction laws since 2013 (Schwartz, 2022). The goal is to align research with classroom practices to benefit all students, particularly those at risk or marginalized.

SoR reforms are causing a shift in teaching methods, spurred by learning science and political forces (Woulfin & Gabriel, 2022). These changes necessitate a significant commitment to transformative educational reform (Fullan, 2015). The literature suggests that SoR principles should consider a variety of factors to address complexity and equity in education (Duke &

Cartwright, 2021). Professional development in SoR has been shown to improve teacher content knowledge and self-efficacy (Schaefer, 2023), emphasizing that teacher preparation is essential for successful implementation (Paige et al., 2021).

Principal's Sense-Making of Implementing an Instructional Reform

To gain insight into how principals make sense of leading a teacher professional development program related to the SoR, we employed Spillane et al.'s (2002) framework for sense-making. The sense-making theory has been widely used in the field of education, including studies explicitly focusing on new program implementation (e.g., Halverson & Clifford, 2006; Rigby, 2015). Spillane et al. (2002) developed a cognitive framework to characterize sense-making in implementing recent education policy initiatives, such as standards-based reforms that press for tremendous changes in classroom instruction. In this study, we operationalized sense-making as how school principals construct meanings regarding their leadership in teacher professional development within a districtwide instructional reform.

Sense-making is commonly understood as the cognitive process of receiving information, interpreting it within a framework, and leveraging it to guide actions and behaviors, thereby shaping individual understanding and perception (Evans, 2007). In particular, the findings of sense-making research revealed two broad themes: (1) principals' prior experiences significantly influence their understanding of new policies (Jacob & Lefgren, 2008; Reid, 2020), and (2) the local context influenced principals' sense-making, and thereby the implementation of policies (Coburn, 2005; Spillane et al., 2002). These two broad theoretical perspectives guided the deductive thematic analysis in this study.

Principals' Sense-Making of Leading Teacher Professional Development

School principals are presently confronted with an expanding array of intricate leadership responsibilities. Noteworthy among these is the task of leading teacher professional development, a facet that has attracted increased scholarly attention due to its inherent linkage with the provision of high-quality teaching (Carraway & Young, 2015; Darling-Hammond et al., 2017). This growing emphasis has been reinforced by research findings that underscore the relevance of teacher learning as a conduit through which school leaders exert their influence on the interplay between teaching and learning (Kwakman, 2003; Leithwood et al., 2010; Liu et al., 2016; Zepeda et al., 2021). As argued by Bredeson (1999) about two decades ago, one critical aspect of the principal's role involves challenging existing norms to foster new perspectives on teaching, learning, and schooling. Therefore, how and to what extent school principals could effectively lead teacher professional development emerges as a critical factor in shaping successful school change and improvement.

While policymakers have intensified their efforts to develop, implement, and sustain effective teacher professional development programs (see Table 1), scholars have devoted increasing attention to understanding how principals make sense of these initiatives (Darling-Hammond et al., 2017; Haiyan et al., 2017). More specifically, evidence from research conducted in different parts of the world indicates that school principals encounter various tensions when implementing reforms aimed at improving teaching and learning. As a result, they are compelled to engage in a

sense-making process regarding their current leadership and management roles and the experience, knowledge, and skills associated with these roles (Halverson et al., 2004; Jones et al., 2015).

Table 1. Best Practices for Effective Professional Development

Category	Element	Description
Foundations of job-embedded learning	Relevance for adult learners	Tailored and highly individualized learning experiences that adults find valuable and that contribute to their success.
	Feedback process	Incorporates feedback and collaborative supports as an integral part of the learning process, including mechanisms like peer coaching.
	Inquiry and reflection	Encourages critical thinking and reflective practices about one's teaching, either individually or in a group setting.
	Transfer of skills collaboration	Offers ongoing support linked to applying newly learned skills directly into teaching practice. Facilitates the sharing of knowledge, discussions, and reflections among teachers to foster a community of practice.
Key features of professional job-embedded learning	Embedded and relevant	Learning opportunities are part of the regular workday and directly address the needs of the teachers.
	Extended and continuous	Learning experiences span over time with adequate opportunities for interaction among colleagues, ensuring continuity and follow-up.
	Alignment with standards	Aligns with state standards, school policies, and is specific to the content and grade level, following adult learning principles.
	Data-driven	Uses data to frame and assess learning needs effectively.
	Ongoing evaluation	Features continuous assessment and evaluation to monitor progress and effectiveness.

Adapted from Zepeda, 2019

The sense-making process of school leaders varies significantly based on their prior knowledge, deeply held values, beliefs, practices, and the social contexts in which they operate (Ganon-Shilon & Schechter, 2017). For example, in a case study involving 60 Israeli high school principals implementing a national reform, Ganon-Shilon and Schechter (2018) observed that the reform necessitated alterations in teachers' work habits and imposed a heavier workload. Consequently, principals who highly valued maintaining a positive atmosphere in their schools perceived the need to balance meeting their teachers' needs and adhering to the reform guidelines.

Similarly, in another case study, Qian and Walker (2013) noted that principals held reservations regarding teachers' ability and dedication to implement curriculum innovations effectively, which might be perceived as potential impediments to the reform's effectiveness in enhancing teaching and learning outcomes. Additionally, Qian and Walker highlighted a misalignment between the reform mandates and the practical realities within schools. While the reform ostensibly aimed to grant schools greater autonomy in organizing and sustaining teacher development initiatives, it failed to provide mechanisms that empowered teachers to determine the content and methods of their professional growth.

While school principals exercise substantial autonomy in addressing school-wide issues, they grapple with the imperative of adhering to top-down mandates associated with educational reform initiatives that enhance teacher professional development (Drago-Severson, 2007). This dynamic process compels school principals to attribute a novel meaning to the gap between what they have done to improve teacher development and what is expected from them (Ganon-Shilon et al., 2021; Sahlin, 2023). Drawing on their accumulated reservoir of prior experiences, knowledge, and core values, principals are expected to make sense of adopting, executing, and fortifying teacher development initiatives.

Methods

This study presents a qualitative case study design to examine how principals make sense of tensions while leading a teacher professional learning initiative (Merriam, 1998; Yin, 2009). This case study emerged from a multiyear mixed-method research project that examined the SoR implementation within a southeastern school district and its seven elementary schools for two years. Adopting the case study approach facilitated the exploration of the diverse sense-making processes undertaken by seven principals working in different educational environments within the same school district.

As part of a larger project, this study specifically centered on principals' understanding of the tensions related to leading a teacher professional learning initiative during the initial year of the SoR implementation. The decision to concentrate on the first year stemmed from our research purpose to gain insights into school principals' initial reactions to the implementation of the new program. The choice of principals as the unit of analysis is rooted in their role as instructional leaders who bear responsibility for teachers' professional development in their schools (Day et al., 2016; Liu & Hallinger, 2018).

Study Context

This study centered on a moderately sized school system in the southeastern United States. This school system initiated a collaborative, grant-funded effort emphasizing the SoR to equip all children with the fundamental language and literacy skills necessary for a self-determined life path. As a broad overview, the SoR compiles extensive research spanning various languages and involving experts from education, special education, literacy, psychology, and neurology. It draws from diverse research methods and statistical analyses, offering conclusive and empirically supported insights into how reading is learned, along with the involved skills, their interactions, and the brain regions responsible for reading development. The SoR research

informs an evidence-based teaching approach for foundational literacy skills called Structured Literacy (Ordetx, 2021).

As part of increased nationwide interest in literacy reforms, the school system where the present study was conducted proactively took the lead in adopting SoR at an early stage to become an influential national example. To realize this vision, this school district employed an unconventional teacher professional development approach to districtwide instructional reform, prioritizing the swift adoption of promising literacy practices. This approach led to the expectation that teachers would implement instructional changes even as they continued to grasp the broader reform process. To facilitate this, the SoR-based practices were segmented into 10 distinct modules to be implemented over a two-year period. During the first year, all K–3 instruction revolved around learning and integrating the initial five modules into their teaching practices, encompassing “Knowledge about SoR, Oral Language, Phoneme Awareness, Phonics and Spelling, and Fluency.”

In this school system, the implementation of the SoR efforts started with three days of professional development provided to the principals and the instructional coaches about SoR in Spring 2021, as well as two-days of teacher professional development related to the SoR in Summer 2021 for all K–3 teachers in the district. The professional development in the summer of 2021 with the teachers included building-level principals and instructional coaches. During these professional development days, principals, instructional coaches, and teachers were engaged in video-based professional development, where they watched five videos related to different components of the SoR.

These two sets of professional development were provided by two external consultants who engaged personnel in the science behind the SoR, focusing on the brain and the cognitive and developmental aspects of children in grades PreK–3. One consultant maintained engagement with professional learning by providing one hour monthly meetings with the principals. This open forum allowed principals to interact and learn alongside each other, with the consultant facilitating discussions.

As a part of this instructional reform effort, the school system committed to collaborating with a private professional development center (PPDC) that has experience with the successful implementation of SoR. The role of the PPDC for the reform included (1) bi-weekly district meetings, (2) research and review of instructional resources, (3) research and review of appropriate assessments, (4) monthly instructional coach meetings, (5) monthly in-school support and coaching to instructional coaches and teachers that last a week by experts from PPDC, and (6) instructional walkthroughs with feedback and support experts from PPDC. In particular, the PPDC’s role involved sustaining a portion of the professional development initiatives throughout the school year. This was planned by appointing three SoR experts across the schools within the system, with every school having its designated expert responsible for leading the monthly SoR cycle weeks.

The experts were to work with the instructional coaches, principals, and teachers who taught literacy in grades K–3. According to the SoR Collaborative Commitments, the experts were at the site to co-plan a week-long series of instructional activities—e.g., providing support and

coaching in the schools, conducting instructional walkthroughs with additional feedback and support, and engaging in demonstration lessons with debriefing sessions.

By the end of the fall semester of 2021, the school system had to part ways with two of the three external PPDC experts due to concerns voiced by principals, instructional coaches, and teachers. These concerns centered on the experts' lack of professionalism and inconsistencies, including failing to attend scheduled professional development sessions and providing conflicting information regarding the implementation materials and their own instruction. In response to this setback, the school system took action by reassigning an experienced coach from one of the elementary schools to the central office. This move aimed to ensure continued support for the SoR initiative across schools affected by the change in personnel. Meanwhile, a single PPDC expert, noted for their effectiveness, remained engaged with the SoR initiative for the entire school year.

Overall, the school system launched a comprehensive initiative to integrate the SoR into K–3 education, providing year-long professional development for teachers and instructional coaches (see Appendix A for the timeline). This significant reform effort led to various tensions for all elementary school principals throughout the year. This study offers a case study of a school district undergoing a districtwide instructional reform—a microcosm of a national trend—emphasizing how elementary school principals perceive and address tensions involved in leading teacher professional development during this reform. The district was chosen for convenience sampling due to the researchers' prior involvement with the district as external program evaluators. Notably, the semi-structured interviews for this research were designed explicitly for this study and were not part of the larger program evaluation.

Data Collection

This study is part of a larger multi-method project focusing on the implementation of the SoR in seven elementary schools in one district. The data collection process for the overarching research project employed diverse methods, including semi-structured interviews with different stakeholders, examination of implementation documents, and analysis of student achievement data. For the present study, the research team concentrated solely on three rounds of semi-structured interviews with seven elementary school principals. Each round of interviews, lasting approximately one hour, was strategically designed to extract insights into the evolving perspectives of the principals regarding implementation tensions. Due to the semi-structured nature of the interviews, each interview guide had four broad questions. Based on the principals' responses, follow-up questions were naturally asked during the interview. The rationale behind this strategy was to unravel their interpretations and approaches to leadership at different stages of the implementation process.

Participants

The principals who serve the elementary schools in this school system were highly skilled instructional leaders. Table 2 highlights the school principals' years of experience as teachers and principals at their current site. The average years of experience in their current site was approximately five years. Similarly, the average number of years of experience as a classroom

teacher is about nine years. All school principals are veteran educators based on their years of experience as teachers and leaders.

Table 2. School Principals' Years as Educators and Background in Reading and Literacy

Principal	Number of years as principal at the current site	Number of years as a teacher	Subject taught	Prior PD in reading and literacy
SP1	Less than 5	More than 9	K–3 English Language Arts	
SP2	Less than 5	More than 9	K–3 English Language Arts	-Training on small group instruction
SP3	More than 5	More than 9	K–3 English Language Arts	-Postgraduate education/training - Literacy initiatives at the previous district
SP4	Less than 5	Less than 9	Not K–3 English Language Arts	-Targeted professional development on effective reading strategies -Training related to different reading components within a project-based learning model
SP5	Less than 5	Less than 9	K–3 English Language Arts	-National conferences -Postgraduate education/training
SP6	Less than 5	Less than 9	Not K–3 English Language Arts	-Mostly self-learning through podcasts
SP7	More than 5	More than 9	K–3 English Language Arts	-Postgraduate education/training -Training at the previous district -Self-learning through podcasts

Most principals held the position of assistant principal, central office leader, or principal before their tenure at their respective buildings. A majority of the principals served as instructional

coaches either in the current or in other school systems. While almost all principals have a teaching background in reading and/or literacy at the K–3 level, only two principals have not taught ELA at the K–3 level. Moreover, data illustrate that most school principals were already highly trained in reading and literacy, from self-training by book readings to postgraduate training at several prestigious universities/institutes.

Data Analysis

The data collection process for this study was carried out through semi-structured interviews, using Zoom technology for convenience and accessibility, which were then audio recorded to ensure accuracy in data collection process. Following the completion of these interviews, a detailed transcription from Zoom technology was used for each recording, and later researchers cleaned the transcripts for inconsistencies.

The development of the interview guide, which structured these semi-structured conversations, was deeply informed by an extensive review of relevant literature. This review helped shape questions that would elicit rich insights into how principals understand and navigate the tensions involved in leading teacher professional development initiatives, particularly within the context of the SoR implementation. This alignment between the literature review and the interview questions was pivotal in ensuring that the data collected was both relevant and comprehensive.

Once transcribed, the interviews underwent a detailed line-by-line analysis. This rigorous examination was not just about understanding the principals' responses but about diving deeper into the nuances of their experiences and perspectives. This process facilitated the inductive formation of categories, which were systematically aligned with the thematic structures anticipated in the semi-structured interview guides. This categorization was not static; it evolved as the analysis progressed, ensuring that the framework for categorization remained reflective of the data's complexities.

The analytical journey continued with an examination of the responses provided by all seven principals over the course of three distinct rounds of interviews. This longitudinal approach allowed for the observation of changes in perceptions and the identification of persistent themes over time. The audio transcripts were coded, a process that involved labeling sections of the text with labels to identify and categorize common tensions that emerged across the interviews. This coding process was iterative, with initial codes being refined and sometimes redefined to better capture the essence of the principals' narratives.

Further refining the analysis, these categories were then recoded to more explicitly draw out the principals' sense-making processes regarding these tensions. This phase of the analysis was particularly focused on how principals' prior experiences and the specific contexts of their schools influenced their interpretation and management of the challenges faced. This step was crucial in moving beyond the identification of tensions to understanding the underlying processes through which these school leaders made sense of and navigated their complex realities.

In summary, the data analysis for this study was a multi-layered and dynamic process, designed to uncover the deep insights into the principals' experiences and strategies in managing the

professional development of teachers under the SoR initiative. Through this detailed analytical process, the study aims to contribute meaningful findings to the ongoing discourse on educational reform and leadership in the context of teacher professional development.

Trustworthiness

As a part of this approach, the research team crafted the semi-structured interview questions, and the central office leaders of the school district were allowed to offer their insights and feedback on these questions. The deputy superintendent at the time of study provided feedback to questions. Principals did not ask for feedback on questions to prevent them stressing out about providing appropriate answers instead of their authentic answers. This collaborative approach served to validate the questions, ensuring their alignment with the ongoing work in the schools as principals implemented the SoR initiative. In addition, the outcomes of each interview contributed to the refinement of questions for subsequent interviews. The lead researcher who conducted all interviews in this study was a former educational leader and teacher. Hence, she was able to leverage her practical experience to establish a strong rapport with the principals. In addition, to mitigate the bias during the data analysis, transcript data were analyzed individually by each of the three researchers and then collectively as a team to ensure more reliable analysis.

Findings

Across the elementary schools in this district, implementing the SoR initiative and the subsequent professional development for this instructional reform has generated tensions primarily rooted in the disparity between expected reform efforts and the reality in schools. This study categorizes three main tensions experienced by principals as: 1) Learning While Teaching: Approaches in Teacher Professional Development, 2) Different Level of Teacher Buy-in on the Instructional Reform, and 3) Teacher Accountability During a Reform. Nevertheless, school principals held diverse viewpoints about these tensions. In the following section, we scrutinized these dimensions of the roll-out from the principals' perspectives.

Learning While Teaching: Approaches in Teacher Professional Development

In this study, a significant number of principals identified their main tension as managing the distinctive approach to the implementation of the SoR initiative. This approach required merging training directly with its application in the classroom (alternatively, undergoing training and then immediately implementing those strategies versus simultaneously training and implementing).

Several principals shared that the SoR program was ineffective and that the implementation was not very coordinated. Hence, there was a tension between the implementation expectations from the central office and how much their teachers could implement the principles of the SoR. Principals mentioned the tensions emphasizing the unusual approach to program implementation and teacher professional development. One principal lamented, “[t]eachers, coaches, and principals are being asked to learn, adapt and/or quit using practices, replacing them with practices and strategies that are being learned “on the fly.” Another principal shared, “[i]t was difficult for principals to learn and to lead at the same time. The difficulty was due primarily to a lack of knowledge and complete understanding of the concepts behind the SoR.”

Another principal depicted her role as an instructional leader using the analogy of ‘distance’ to describe this tension: “I’m about an inch ahead of my teachers, and I’m comfortable in 10 feet.” Another principal, elaborating more directly on the tension, stated, “Unfortunately, I am probably only one meeting ahead of them [teachers].” Contrastingly, a principal from a historically well-functioning school held the belief that when everyone is learning simultaneously, the workload becomes somewhat more manageable through shared experiences. This principal shared:

I think the newness for everyone is different. Like when you roll out a different program or model someone normally has a lot of experience or a large knowledge base of that, whatever that is, whatever the topic is with science of reading, I feel like we’re all learning it together. And so that’s been very new, and I think it’s also made things a little bit easier because no one’s expected to be an expert.

In general, the majority of principals expressed discomfort with the ambiguity surrounding the implementation of SoR practices. This uneasiness primarily stemmed from the absence of long-term plans and a comprehensive districtwide framework for guiding such practices. It appears that principals perceive a need for well-established and sustainable strategies, coupled with a district-owned framework, to lead and implement SoR practices in the district effectively.

Different Level of Teacher Buy-in on the Instructional Reform

During the implementation of this program, the central office held the belief that teachers would support their school reform initiative if they were provided with adequate training, resources, and assistance from content experts, support at the school level, approval from administrators, and the freedom to implement the reform in their classrooms. Accordingly, principals in this study observed that the majority of teachers displayed enthusiasm for the SoR and genuinely embraced its mission to improve student achievement. However, as noted by principals in their initial interviews, some teachers expressed concerns, particularly regarding standardized testing, and harbored reservations about the initiative’s effectiveness. In the second round of interviews, resistance to implementing the SoR was observable among some teachers in certain schools, presenting itself as a form of tension that principals had to face.

Although the principals expressed confidence in their ability to garner high levels of teacher buy-in during earlier interviews, many principals in schools with lower student achievement later voiced concerns about the actual buy-in levels in their schools. While some principals remained confident that they had achieved 100% teacher buy-in, others shared differing perspectives. For example, one principal shared:

I think some pockets believe in the science of reading, and they’ve made attempts ... and have seen growth. We have other pockets that are just very resistant to change. They think that’s going to cause them more work. Approximately 30% of all teachers express excitement, 20-30% remain undecided or hesitant, and the remaining portion expresses reluctance or resistance.

In another school, a principal shared about less resistance by elaborating:

I would say 90% of our teachers are excited about it, and you still probably have about 10% resistance for the most part. The teachers see the differences in the foundational reading skills that the students have now that they're more equipped to decode and encode words.

Another principal shared that regardless of the buy-in, teachers' capability to implement SoR was their real concern by adding:

I wouldn't say I have anyone who's not into it. I have two teachers who I worry if they can do the work, like all the support we've given, and it's still not happening the way it really needs to be, which is alarming.

In addition, in their concluding round of interviews, some principals were optimistic that all teachers would fully support the reform initiative once they witnessed significant improvements in student achievement resulting from the new instructional approaches. Conversely, other principals faced tensions in convincing resistant teachers in their schools to embrace and implement the SoR.

Overall, a trend emerges that the most significant tension perceived by the principals involved the external experts who were assigned to work with their schools. The tensions increased when two of the three external consultants left. The turbulence during this transition not only compromised the credibility of the reform efforts but also dampened the enthusiasm of both principals and instructional coaches. Contrastingly, two principals in those schools where the external expert remained intact throughout the first year of SoR implementation experienced minimal tension regarding the anticipated teacher buy-in versus the actual reality in their schools.

Teacher Accountability during a Reform

The school district aimed to foster a supportive environment for the instructional reform initiative by establishing districtwide expectations for implementation accountability. These expectations explicitly state that student outcomes or the rating of teachers' instructional practices in reading and literacy should not be considered in any teacher accountability efforts during the first year of implementation. Despite the clear directive to exclude SoR practices from teacher accountability, no guidelines were provided on how to ensure teachers implement SoR in their classrooms.

As such, balancing the accountability of teachers' overall instructional effectiveness with the motivation to support their implementation efforts of the SoR posed tension for principals. For example, a few principals facilitated accountability-oriented observations to improve their implementation efforts regardless of the clear policy message from the central office. In addition to accountability for instructional effectiveness, some principals successfully integrated the SoR initiative within the statewide teacher evaluation system's "professional growth component." However, other principals struggled to balance encouraging teachers to experiment with new

instructional models and fulfilling official classroom observation requirements for the statewide teacher evaluation system.

Two principals who had experienced wide-scale program roll-out throughout their careers reported that their classroom observations still did not emphasize SoR-related practices in the context of teacher evaluation and focused on subjects other than English Language Arts (ELA). They expressed concerns that incorporating SoR into the statewide teacher evaluation system's observations could induce teacher anxiety, potentially hindering future learning and implementation. One principal shared that she continued to conduct observations and walkthroughs as she did before the SoR implementation, but never when a teacher was teaching ELA. She noted that she only conducted classroom observations for SoR when a teacher requested it for feedback.

Another group of principals chose not to conduct classroom observation when they knew that teachers were practicing SoR. Even if they observed an ELA lesson, these principals conducted observations predominantly centered on teachers' practice of SoR knowledge in their teaching to create an environment that allowed for more flexibility and encouragement in the SoR implementation. One principal described her approach to such classroom observations as "diagnostic, with a wealth of available data." She thinks such an approach allows for intentional and purposeful observation, which enables more precise identification of the skills and concepts teachers need to refine in their teaching practices.

A few principals conducted classroom observations while teachers were trying to implement SoR. They summarized their observations as including increased student engagement, more hands-on activities, changes in teachers' instructional practices, encouragement of students to speak in complete sentences, and increased modeling of skills for students. The principals who conducted classroom observations for accountability were also proactive in providing feedback. During post-observation conferences, they used this time for reflection, building on the content covered in previous coaching cycles and discussing how teachers implemented specific skills and concepts in their classrooms. For instance, one principal shared her approach:

We take videos of the lesson ... parts of the lesson, not the entire lesson. And then, when we do a follow-up post-observation conference, we talk about the lesson, what occurred, and how things could change ... what we could do differently.

Some principals were able to connect the SoR initiative with the statewide teacher evaluation system as a part of the professional growth component. In contrast, others struggled with the tradeoffs between encouraging teachers to try new models and having to do official classroom observation ratings. In conclusion, principals' approaches to observing SoR implementation varied, with some focusing on accountability while others emphasized flexibility and support in the implementation process.

Overall, one of the key tensions for principals in implementing the SoR initiatives lies in striking a balance between teacher accountability and the need to foster motivation. Principals varied in their approaches, with some seamlessly integrating accountability into teacher evaluations while others grappled with this delicate balance. Concerns about inducing teacher anxiety led some

principals to shift focus away from ELA during observations. Conversely, those adopting a flexible approach concentrated on teachers' application of SoR knowledge to promote autonomy. Some principals reported positive outcomes, such as increased student engagement, diverse activities, and changes in teaching methods, under an accountability-driven approach. The various approaches emphasize the need for nuanced and adaptable strategies tailored to individual schools and teachers, acknowledging the delicate balance between accountability and encouragement for successful SoR implementation.

Discussion

In this section of the paper, we first provide our study limitations and potential research avenues. Then, we interpret our study findings. We conclude this section by presenting implications for policy and practice.

Study Limitations and Future Research

Our study has several limitations that should be considered when interpreting findings. First, due to the timing of the study, the school district was grappling with the ongoing tensions presented by the COVID-19 pandemic. Therefore, the research team could not actively participate in on-site visits and observations, potentially restricting the size and depth of data collected. Second, the study's focus on a specific school district in the southeastern United States might limit the generalizability of the findings to other contexts or educational settings. Factors unique to this district, such as its geographical location, demographic composition, or specific educational policies, could influence the results and restrict their broader applicability.

The SoR initiative is still evolving; therefore, much remains to be explored regarding the tension around the SoR implementation. Thus, future inquiries could explore additional influential factors such as district-level support and community involvement. Further investigations into the dynamics of teacher buy-in and exploring specific strategies to enhance it would add significantly to the literature and might guide policy and practice for the betterment of SoR practices. Finally, we believe the literature would benefit from longitudinal studies assessing the sustained impact of SoR practices on students' academic or non-academic outcomes.

Interpretations of the Findings

First, the findings underscore the tensions principals experienced due to their lack of prior knowledge and experience in implementing the SoR practices. The absence of a solid foundation in the principles and philosophies underlying the SoR posed considerable obstacles for the principals, as they found themselves grappling with the task of learning while simultaneously supporting teachers in implementing new instructional practices. This dual tension was undoubtedly a significant setback, as it hindered the seamless integration of the SoR into the school curriculum.

School principals are accountable for enhancing their and their teachers' professional learning to ensure the quality of instructional practices within their schools. Thus, principals, as leaders of their schools, play a crucial role in guiding their teaching staff toward the effective

implementation of new policy interventions (Bush, 2018; Darling-Hammond et al., 2017). However, without a robust understanding of the underlying theories, they could not successfully provide the support and guidance required to transition to the SoR approach. This lack of knowledge hindered the efficacy of their leadership practices and raised concerns about the overall effectiveness of the SoR initiative within their schools.

Our analysis also revealed that the absence of long-term plans and a comprehensive districtwide framework for leading SoR practices exacerbated the tensions faced by the principals. This finding echoed previous works suggesting the role of systematic planning in successfully implementing reform initiatives (Darling-Hammond et al., 2017; Hardman et al., 2015). Our findings elaborated that the lack of a cohesive strategy impeded principals' ability to create a unified vision for integrating SoR practices across different classrooms. Consequently, this led to fragmented efforts and inconsistencies in the implementation process, potentially compromising the initiative's overall impact on student learning outcomes.

In the context of Spillane et al.'s (2002) theory of sense-making, it is evident that the absence of prior mental maps or schemas significantly impeded the cognitive processes of the principals. Without these foundational constructs, the principals struggled to make sense of the new SoR information and to chart an effective course for its implementation. This tension created a pervasive atmosphere of uncertainty and complexity, which makes it difficult for principals to lead changes in teaching and learning processes and to navigate the nuances of the SoR initiative within their respective school environments (Ganon-Shilon et al., 2021; Wallace & Hoyle, 2012).

The interpretation of our findings can also be framed within the framework of street-level bureaucracy theory (Lipsky, 1980). According to Lipsky, street-level bureaucrats possess discretionary power to interpret and adapt policies to align with the unique requirements of their local contexts. In the context of the SoR implementation, the principals' limited comprehension of the underlying concepts and the absence of comprehensive guidance might have resulted in diverse interpretations and approaches to integrating SoR practices in their schools. This diversity may impede the consistent application of the SoR initiative, potentially diminishing its efficacy in enhancing student learning outcomes.

The second finding underscores the critical role of teacher buy-in in successfully leading teacher professional development. Recognizing the indispensable influence of teachers in translating policy initiatives into effective classroom instruction and improved student outcomes (Fullan, 2015), the principals underscored the significance of securing teacher commitment to the SoR framework. In the educational context, teacher buy-in reflects the intricate interplay between policy implementation and the social dynamics within school environments. Thus, our finding implies that teachers' openness to change, intrinsic motivation, and experience in translating instructional reforms into practice play a critical role in the overall success of the SoR initiative. This finding also emphasizes the necessity for principals to prioritize cultivating a supportive and collaborative culture that fosters teacher engagement and active participation in the implementation process (e.g., Geijsel et al., 2009; Thoonen et al., 2011).

Finally, our findings illustrated how principals navigate the intricate interplay between accountability and motivation during the SoR implementation. In this school district, the

responsibility for evaluation's dual foci—accountability and development—rests largely on principals. They must systematically observe and rate teachers using a standardized rubric while identifying and designing professional learning opportunities by setting professional development goals. However, expecting principals to carry out accountability and development independently during a large-scale instructional reform seems unrealistic. Hence, principals typically modify their responsibilities in teacher evaluation when required to observe teachers' implementing the SoR practices.

The literature suggests that principals might lack specialized content knowledge and resources, including time for ongoing and context-specific learning opportunities during an instructional reform (Rigby, 2015; Woulfin & Rigby, 2017). This is particularly the case when evaluation systems are intended to support content-specific improvement among teachers. Consequently, it becomes essential to explore how district and school-based instructional leaders, including coaches, can collaboratively contribute to instructional improvement efforts. Leveraging coaches' disciplinary knowledge, in particular, could aid in the adaptive implementation of evaluation to promote individual and system-level improvement.

Implications for Policy and Practice

Our study unfolds key implications for policymakers and practitioners. Regarding policy, the tensions illuminated in our findings accentuate the need for targeted policy interventions to support the effective implementation of SoR practices. Therefore, policymakers should prioritize developing and implementing robust leadership training programs specifically designed for principals. These programs must address the identified gaps in foundational knowledge and expertise related to the philosophy and nature of SoR, ensuring that principals are well-equipped to lead teacher professional development successfully.

Such programs should not only cover theoretical aspects but also provide practical insights and resources, enabling principals to navigate the complexities of leading teacher learning around the SoR implementation. Emphasis should also be placed on deepening their understanding of the SoR theories, empowering them to play a pivotal role in facilitating meaningful change within their schools. In addition, policymakers should focus on establishing districtwide frameworks accompanied by long-term plans. This strategic approach is essential for providing a cohesive and structured strategy that guides the successful integration of the SoR practices across diverse classrooms. A unified vision, supported by long-term planning, can mitigate fragmentation and inconsistencies in the implementation process, which might lead to enhancing the impact of the initiative on student learning outcomes.

Moreover, teacher accountability expectations for implementation should be clarified as a part of the roll-out plan. In examining the integration of districtwide instructional reforms into teacher evaluations, particularly at the implementation outset, our study prompts a critical evaluation of this practice. Incorporating the SoR methodologies into teacher evaluations during the initial year may not fully reflect long-term teaching proficiency or dedication, given the typical adjustment challenges and learning curves. These formative stages could benefit from a moratorium on evaluative judgments, allowing educators to internalize new practices without the immediate pressures of assessment impacting their professional evaluations.

Simultaneously, our findings reveal a spectrum of principal strategies in response to these reforms. These adaptive strategies underscore the complexity of implementing new educational reforms and highlight the delicate balance school leaders strive to maintain between fostering innovation and adhering to accountability standards. The varied responses suggest the need for nuanced and context-sensitive approaches to teacher evaluation during significant pedagogical shifts and underline the importance of a clearly defined support framework for principals. This framework would guide the judicious observation and assessment of instructional practices, ensuring the integrity of the reforms while promoting a culture of developmental support.

Practically speaking, our study offers tangible guidance for principals to effectively lead teacher learning within their schools. Acknowledging the pivotal role of teachers in translating policy initiatives into impactful classroom instruction, principals should actively promote teacher involvement in decision-making processes regarding the SoR. Granting teachers increased autonomy in school leadership endeavors might also cultivate a sense of ownership and dedication to the SoR implementation. Therefore, principals should foster a culture of collaboration and support, prioritizing teacher engagement in SoR implementation and the integration of related practices into classroom activities.

References

- Aukerman, M., & Chambers Schuldt, L. (2021). What matters most? Toward a robust and socially just science of reading. *Reading Research Quarterly*, 56(S1), 85–103. <https://doi.org/10.1002/rrq.406>
- Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, 27, 10–20. doi:10.1016/j.tate.2010.08.007
- Bredeson, P. V. (1999) *Negotiated Learning: Unions contracts and teacher professional development*. Paper presented at the Annual Meeting of the American Educational Research Association in Montreal, Canada, April 20.
- Bush, T. (2018). Preparation and induction for school principals: global perspectives. *Management in Education*, 32(2), 66–71. <https://doi.org/10.1177/0892020618761805>
- Carraway, J. H., & Young, T. (2015). Implementation of a districtwide policy to improve principals' instructional leadership: Principals' sensemaking of the skillful observation and coaching laboratory. *Educational Policy*, 29(1), 230–256. <https://doi.org/10.1177/0895904814564216>
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5–51. <https://doi.org/10.1177/1529100618772271>
- Chall, J. S. (1967). *Learning to read: The great debate*. New York: McGraw-Hill.
- Coburn, C. E. (2005). Shaping teacher sense-making: School leaders and the enactment of reading policy. *Educational Policy*, 19(3), 476–509. <https://doi.org/10.1177/0895904805276143>
- Darling-Hammond, L., Hyster, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto: Learning Policy Institute.
- Day, C., Gu, Q., & Sammons, P. (2016). The impact of leadership on student outcomes: How successful school leaders use transformational and instructional strategies to make a difference. *Educational Administration Quarterly*, 52(2), 1–38. <https://doi.org/10.1177/0013161X15616863>
- Derrington, M. L., & Campbell, J. W. (2018). High-stakes teacher evaluation policy: US principals' perspectives and variations in practice. *Teachers and Teaching*, 24(3), 246–262. <https://doi.org/10.1080/13540602.2017.1421164>
- Drago-Severson, E. (2007). Helping teachers learn: Principals as professional development leaders. *Teachers College Record*, 109(1), 70–125. <https://doi.org/10.1177/016146810710900104>
- Drake, G., & Walsh, K. (2020). *2020 teacher prep review: Program performance in early reading instruction*. Washington, DC: National Council on Teacher Quality. Retrieved from <https://www.nctq.org/publications/2020-Teacher-Prep-Review:-Program-Performance-in-Early-Reading-Instruction>
- Duke, N. K., & Cartwright, K. B. (2021). The science of reading progresses: Communicating advances beyond the simple view of reading. *Reading Research Quarterly*, 56(1), 25–44. <https://doi.org/10.1002/rrq.411>
- Evans, E. A. (2007). School leaders and their sense-making about race and demographic change. *Educational Administration Quarterly*, 43(2), 159–188. <https://doi.org/10.1177/0013161X06294575>
- Fullan, M. (2015). *The new meaning of educational change*. Teachers College Press.

- Ganon-Shilon, S., & Schechter, C. (2017). Making sense of school leaders' sense-making. *Educational Management Administration & Leadership*, 45(4), 682–698. <https://doi.org/10.1177/1741143216628536>
- Ganon-Shilon, S., & Schechter, C. (2018). School principals' sense-making of their leadership role during reform implementation. *International Journal of Leadership in Education*, 22(3), 279–300. <https://doi.org/10.1080/13603124.2018.1450996>
- Ganon-Shilon, S., Tamir, E., & Schechter, C. (2021). Principals' sense-making of resource allocation within a national reform implementation. *Educational Management Administration & Leadership*, 49(6), 921–939. <https://doi.org/10.1177/1741143220921191>
- Geijsel, F. P., Slegers, P. J. C., Stoel, R. D., & Krüger, M. L. (2009). The effect of teacher psychological and school organizational and leadership factors on teachers' professional learning in Dutch schools. *Elementary School Journal*, 109(4), 406–427. <https://doi.org/10.1086/593940>
- Goldberg, M., & Goldenberg, C. (2022). Lessons learned? Reading wars, reading first, and a way forward. *The Reading Teacher*, 75(5), 621–630. <https://doi.org/10.1002/trtr.2079>
- Goodman, K. (2008, June 16). *The reading first debacle*. Retrieved June 9, 2022, from <http://www.u.arizona.edu/~kgoodman/readingdeb.pdf>
- Goodwin, A. P., & Jiménez, R. T. (2021). The science of reading: Supports, critiques, and questions. *Reading Research Quarterly*, 56(S1), 7–22. <https://doi.org/10.1002/rrq.416>
- Gunnulfsen, A. E., & Møller, J. (2017). National testing: Gains or strains? School leaders' responses to policy demands. *Leadership and Policy in Schools*, 16(3), 455–474. <https://doi.org/10.1080/15700763.2016.1205200>
- Haiyan, Q., Walker, A., & Xiaowei, Y. (2017). Building and leading a learning culture among teachers: A case study of a Shanghai primary school. *Educational Management Administration & Leadership*, 45(1), 101–122. <https://doi.org/10.1177/1741143215623785>
- Halverson, R., & Clifford, M. (2006). Evaluation in the wild: A distributed cognitive perspective on teacher assessment. *Educational Administration Quarterly*, 42(4), 578–619. <https://doi.org/10.1177/0013161X05285986>
- Halverson, R., Kelley, C., & Kimball, S. (2004). Implementing teacher evaluation systems: How principals make sense of complex artifacts to shape local instructional practice. In W. K. Hoy & C. G. Miskel (Eds.), *Educational administration, policy, and reform: Research and measurement* (pp. 153–188). Information Age.
- Hanford, E. (2019, December 5). *There is a right way to teach reading, and Mississippi knows it*. *The New York Times*. <https://www.nytimes.com/2019/12/05/opinion/mississippi-schools-naep.html>
- Hardman, F., Hardman, J., Dachi, H., Elliott, L., Ihebuzor, N., Ntekim, M., & Tibuhinda, A. (2015). Implementing school-based teacher development in Tanzania. *Professional Development in Education*, 41(4), 602–623. <https://doi.org/10.1080/19415257.2015.1026453>
- Jacob, B. A., & Lefgren, L. (2008). Can principals identify effective teachers? Evidence on subjective performance evaluation in education. *Journal of Labor Economics*, 26(1), 101–136. <https://doi.org/10.1086/522974>

- Johnston, P., & Scanlon, D. (2021). An examination of dyslexia research and instruction with policy implications. *Literacy Research: Theory, Method, and Practice*, 70(1), 107–128. <https://doi.org/10.1177/23813377211024625>
- Jones, M., Adams, D., Joo, M. T. H., Muniandy, V., Perera, C. J., & Harris, A. (2015). Contemporary challenges and changes: Principals' leadership practices in Malaysia. *Asia Pacific Journal of Education*, 35(3), 353–365. <https://doi.org/10.1080/02188791.2015.1056591>
- Kennedy, M. (2016). How does professional development improve teaching? *Review of Educational Research*, 86(4), 945–980. <https://doi.org/10.3102/0034654315626800>
- Koonce, M., Pijanowski, J. C., Bengston, E., & Lasater, K. (2019). Principal engagement in the professional development process. *NASSP Bulletin*, 103(3), 229–252. <https://doi.org/10.1177/0192636519871614>
- Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education*, 19(2), 149–170. [https://doi.org/10.1016/S0742-051X\(02\)00101-4](https://doi.org/10.1016/S0742-051X(02)00101-4)
- Leithwood, K., Patten, S., & Jantzi, D. (2010). Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly*, 46(5), 671–706. <https://doi.org/10.1177/0013161X10377347>
- Lipsky, M. (1980). *Street-level bureaucracy: Dilemmas of the individual in public services*. Russell Sage Foundation.
- Liu, S., & Hallinger, P. (2018). Principal instructional leadership, teacher self-efficacy, and teacher professional learning in China: Testing a mediated-effects model. *Educational Administration Quarterly*, 54(4), 501–528. <https://doi.org/10.1177/0013161X18769048>
- Liu, S., Hallinger, P., & Feng, D. (2016). Supporting the professional learning of teachers in China: Does principal leadership make a difference? *Teaching and Teacher Education*, 59, 79–91. doi:10.1016/j.tate.2016.05.023
- Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: an integration of transformational and instructional leadership. *Educational Administration Quarterly*, 39(3), 370–397. <http://dx.doi.org/10.1177/0013161X0325341>
- Mendels, P. (2012). The effective principal: 5 pivotal practices that shape instructional leadership. *The Learning Professional*, 33(1), 54–58. <https://learningforward.org/wp-content/uploads/2020/03/mendels331.pdf>
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. Jossey-Bass.
- Ordetx, K. (2021). What is the science of reading? *Institute for Multi-Sensory Education Journal*. <https://journal.imse.com/what-is-the-science-of-reading/>
- Paige, D. D., Young, C., Rasinski, T. V., Rupley, W. H., Nichols, W. D., & Valerio, M. (2021). Teaching reading is more than a science: It's also an art. *Reading Research Quarterly*, 56(1), 339–350. <https://doi.org/10.1002/rrq.388>
- Qian, H., & Walker, A. (2013). How principals promote and understand teacher development under curriculum reform in China. *Asia-Pacific Journal of Teacher Education*, 41(3), 304–315. <https://doi.org/10.1080/1359866X.2013.809050>
- Reid, D. B. (2020). US principals' sense-making of the future roles and responsibilities of school principals. *Educational Management Administration & Leadership*, 49(2), 251–267. <https://doi.org/10.1177/1741143219896072>

- Reilly D., Neumann D. L., & Andrews G. (2019). Investigating gender differences in mathematics and science: Results from the 2011 Trends in Mathematics and Science Survey. *Research in Science Education*, 49(1), 25–50. <https://doi.org/10.1007/s11165-017-9630-6>
- Rigby, J. G. (2015). Principals' sense-making and enactment of teacher evaluation. *Journal of Educational Administration*, 53(3), 374–392. <https://doi.org/10.1177/174114321989607>
- Sahlin, S. (2023). Professional development of school principals—How do experienced school leaders make sense of their professional learning? *Educational Management Administration & Leadership*, 1–18. <https://doi.org/10.1177/17411432231168235>
- Schaefer, M. K. (2023). *The effects of a science of reading professional development plan on teachers' perceptions of content knowledge and self-efficacy in instruction: A mixed-methods study*. Graduate Theses and Dissertations Retrieved from <https://scholarworks.uark.edu/etd/4965>
- Schwartz, S. (2022). *Which states have passed 'Science of Reading' laws? What's in them?* <https://www.edweek.org/teaching-learning/which-states-have-passed-science-of-reading-laws-whats-in-them/2022/07>
- Seidenberg, M. S., Cooper Borkenhagen, M., & Kearns, D. M. (2020). Lost in translation? Challenges in connecting reading science and educational practice. *Reading Research Quarterly*, 55(S1), 119–130. <https://doi.org/10.1002/rrq.341>
- Shanahan, T. (2020). What constitutes a science of reading instruction? *Reading Research Quarterly*, 55(S1), 235–247. <https://doi.org/10.1002/rrq.349>
- Smith, F. (1971). *Understanding reading*. New York: Holt, Rinehart & Winston.
- Solari, E., Terry, N. P., Gaab, N., Hogan, T. P., Nelson, N., Pentimonti, J., Petscher, Y., & Sayko, S. (2020). Translational science: A roadmap for the science of reading. *Reading Research Quarterly*, 55(1), 347–360. <https://doi.org/10.1002/rrq.357>
- Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research*, 72(3), 387–431. <https://doi.org/10.3102/00346543072003387>
- Thomas, P. L. (2022). *The Science of Reading movement: The never-ending debate and the need for a different approach to reading instruction*. Boulder, CO: National Education Policy Center. <http://nepc.colorado.edu/publication/science-of-reading>
- Thoonen, E. E., Slegers, P. J., Oort, F. J., & Peetsma, T. T. (2011). Building school-wide capacity for improvement: The role of leadership, school organizational conditions, and teacher factors. *School Effectiveness and School Improvement*, 23(4), 441–460. <https://doi.org/10.1080/09243453.2012.678867>
- Timperley, H. (2011). Knowledge and the leadership of learning. *Leadership and Policy in Schools*, 10(2), 145–170. <https://doi.org/10.1080/15700763.2011.557519>
- Tuytens, M., & Devos, G. (2017). The role of feedback from the school leader during teacher evaluation for teacher and school improvement. *Teachers and Teaching*, 23(1), 6–24. <https://doi.org/10.1080/13540602.2016.1203770>
- Wallace, M., & Hoyle, E. (2012). The dynamics of irony in organizational change: coping with a school merger. *Public Administration*, 90(4), 974–999. <https://doi.org/10.1111/j.1467-9299.2012.02038.x>
- Woulfin, S. L., & Gabriel, R. (2022). Big waves on the rocky shore: a discussion of reading policy, infrastructure, and implementation in the era of science of reading. *The Reading Teacher*, 76(3), 326–332. <https://doi.org/10.1002/trtr.2153>

- Woulfin, S. L., & Rigby, J. G. (2017). Coaching for coherence: How instructional coaches lead change in the evaluation era. *Educational Researcher*, 46(6), 323–328.
<https://doi.org/10.3102/0013189X17725525>
- Yaden Jr, D. B., Reinking, D., & Smagorinsky, P. (2021). The trouble with binaries: A perspective on the science of reading. *Reading Research Quarterly*, 56(S1), 119–129.
<https://doi.org/10.1002/rrq.402>
- Yin, R. K. (2009). *Case study research: Design and methods*. Sage.
- Zepeda, S. J. (2019). *Professional development: What works* (3rd Edition). Routledge.
- Zepeda, S. J., Derrington, M. L., & Lanoue, P. D. (2021). *Developing the organizational culture of the central office: Collaboration, connectivity, and coherence*. Routledge.

Author Biographies

Sally J. Zepeda is a Professor of Educational Administration and Policy at the University of Georgia. She teaches courses in leadership, supervision, professional learning, and personnel evaluation. She has written widely in educational administration focusing on teacher and leader supervision and evaluation, school and district leadership, and succession planning. Her book, *Instructional Supervision: Applying Tools and Concepts* (4th ed.), was also translated into Turkish.

Salih Çevik received his Ph.D. in Educational Administration and Policy at the University of Georgia, and he is a postdoctoral research associate at the University Council for Educational Administration at Michigan State University. He obtained his Master of Arts Degree in Educational Leadership and Policy at the University of Minnesota. He received the Turkish Study Abroad Scholarship, the College of Education and Human Development Advanced Study Scholarship, and the Ray E. Bruce Award.

Ali Çağatay Kılınc is a Professor in the Department of Educational Sciences, Faculty of Letters, at Karabuk University, Türkiye. His research focuses on school leadership, school improvement, teacher learning, and practices. During the 2023-2024 academic year, he has been serving as a visiting scholar in the Department of Lifelong Education, Administration, and Policy at the University of Georgia, under the 2219 fellowship program supported by The Scientific and Technological Research Council of Türkiye.

Appendix A

Professional Development Timeline

Month	Focus	Outcomes –Teachers will:
June and July, 2021	Training: <ul style="list-style-type: none"> • The simple view of reading—Begin considering the complexity of learning to read and reading instruction • What to teach and how to teach 	<ul style="list-style-type: none"> • dedicate themselves as learners throughout this PD effort. • identify the reading domains leading to deeper study; highlight the Five Components of reading; and what is necessary for reading comprehension to occur. • study the elements of effective teaching; identify elements for personal growth; discuss plans to revisit goals when school begins.
June and July, 2021	Training: <ul style="list-style-type: none"> • The components of language • The language rich classroom • The teacher’s verbal behavior in classrooms 	<ul style="list-style-type: none"> • define and plan for the development of a language rich classroom • learn the importance of modeling language for our students • determine students’ language strengths and weaknesses and develop responses • learn many language development activities that can become classroom routines
September, 2021	Training in the schools: <ul style="list-style-type: none"> • Review and plan for implementation of the goals from the summer training Data Analysis—setting up whole group and small group instruction to target student needs: language and decoding.	<ul style="list-style-type: none"> • review student data available, plan Benchmark phonics lessons using STEP planning tool plan to implement language rich classrooms review Action Plan
	Teachers work through phoneme awareness independently during September.	

Month	Focus	Outcomes –Teachers will:
October, 2021	<p>Training in the schools:</p> <ul style="list-style-type: none"> • What is phoneme awareness • Articulation of phonemes • Informal assessment and a continuum of development • Teaching phoneme awareness <p>Teachers work through phonics and spelling during October.</p>	<ul style="list-style-type: none"> • define the importance of phoneme awareness • deepen an appreciation for the phoneme’s role in word meaning, reading, and spelling <p>Learn the correct articulation of the consonant and vowel phonemes</p> <ul style="list-style-type: none"> • define the terms associated with phonological awareness • apply many brief phonological and phoneme awareness activities throughout the day • review and determine successes and need—Action Plan
November, 2021	<p>Training in the schools:</p> <ul style="list-style-type: none"> • Learning about the reading brain and the importance of systematic and explicit decoding instruction. • What is explicit and systematic instruction? • What is structured literacy? <p>Teachers work through phonics and spelling during November.</p>	<ul style="list-style-type: none"> • define and apply the phases of word recognition development • recognize students’ word recognition phases and apply appropriate word level instruction • identify the four areas in the reading brain and understand reading activation patterns • teach phonics and spelling explicitly and systematically • match reading materials to student word level reading • build practice activities into phonics lessons—phoneme grapheme

Month	Focus	Outcomes –Teachers will:
January, 2022	<p>Training in the Schools: The intervention Group</p> <ul style="list-style-type: none"> • Review and refine small group instruction: Benchmark phonics, OG, and the STEP lesson frame <p>Teachers work through Fluency independently during January.</p>	<ul style="list-style-type: none"> • delve into data analysis and continue to refine and perfect the small group intervention lesson • model and observe explicit and systematic lessons and debrief learning • review and determine successes and need—Action Plan
February, 2022	<p>Training in the schools:</p> <ul style="list-style-type: none"> • The importance of reading fluency and why • Assessment of reading for planning targeted instruction • The usefulness of progress monitoring <p>Teachers return to review any of the previous professional learning as needed during February.</p>	<ul style="list-style-type: none"> • deepen understanding of reading fluency • learn the importance of assessing the underlying reading skills that lead to automaticity • understand high frequency words and sight vocabulary—the differences and how to teach. • learn and apply several Practice activities • review and determine successes and need—Action Plan
March, 2022	<p>Training in the schools: Effective Teaching Processes</p> <ul style="list-style-type: none"> • Explore the principles and analyze personal teaching habits that include these teaching methods 	<ul style="list-style-type: none"> • Model and observe for the effective teaching principles • Review goals set earlier in the year, set new goals • Review student progress monitoring data and plan instruction
April, 2022	<p>Training in the schools: Review Previous Professional Learning</p> <ul style="list-style-type: none"> • Evaluation of personal learning and student gains 	<ul style="list-style-type: none"> • Review articulation, analyze student writing samples, determine student gains in phoneme awareness and address any continuing need • Refine decoding lesson format—practice activities

Month	Focus	Outcomes –Teachers will:
May, 2022	Training in the schools: <ul style="list-style-type: none">• Vertical Alignment across grade levels• Work with instructional coaches and facilitators to determine practices that are present across grade levels K–3;• define those practices; reflect on how the practices are adapted across grade levels• Prepare schools for Year 2—Set up expectations for language, vocabulary, reading and listening comprehension and writing.	<ul style="list-style-type: none">• develop plans for consistent and shared instruction• commit to instruction that applies the principles of effective instruction: Explicit and systematic structured literacy processes.• continue to apply the language rich classroom techniques that were developed throughout the year.
