COHERENCE OF READING-POLICY GOALS AND INSTITUTIONALIZED READING-INSTRUCTION PRACTICES IN 16 SMALL RURAL SCHOOLS IN CONNECTICUT:
A MIXED METHODS COMPARATIVE CASE STUDY

by
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Abstract

BACKGROUND Federal reading policy attempts to control the technical core of the classroom to achieve the policy goal that 95% of all students read at a proficient level before completing third grade. Yet, reading policy proves insufficient to influence the technical core of the classroom. The purpose of this study was to explain the microfoundational process between the input of reading-policy guidelines and the output of various degrees of reading policy coherence.

METHODS To begin, curriculum reviews and structured observations were conducted to identify two extreme deviant cases: one school with higher and one school with lower degrees of reading-policy coherence. Interviews conducted in each of the extreme deviant cases were analyzed separately. Then the separate data sets were compared using cross-case analysis.

RESULTS Alignment between reading curriculums and reading-policy guidelines ranged from 0% to 62.8%. Alignment between reading-instruction practices and reading-policy guidelines ranged from 33.2% to 64.8%. Thematic analysis revealed different microfoundational processes linked to varying degrees of policy coherence. Cross-case analysis revealed that in the higher coherence school, microfoundational processes coalesced to achieve reconciliation between policy and practice. Conversely, in the lower coherence school, microfoundational processes coalesced to decouple reading instruction practices from policy guidelines.

CONCLUSIONS Identification of the microfoundational processes linked to varying degrees of reading-policy coherence may inform mediation between reading policy and reading instruction practices to increase reading-policy coherence. Study results included developing a method that, if replicated, may inform reconciliation between policy and practice.

Dissertation Committee: Dr. Laurence Peters, Dr. Henry Smith, and Dr. Timothy Guetterman
Dedication

This dissertation is first dedicated to my fierce nephew Ethan. The dissertation is further dedicated to the rural district leaders, principals, teachers, students, families, and communities locked into reading-instruction cultures informed not by the truth, the science of reading, but by an unfounded belief, that reading is acquired through implicit exposure.
Acknowledgments

Just as this dissertation represents the voices of many, completing the doctoral process represents the efforts of many. I am deeply appreciative to my husband, Mark DeBisschop, sons, daughters-in-law, extended family, and friends for their support, patience, and encouragement. I am further grateful to my executive sponsor, and the reading researchers, superintendents, literacy leaders, teachers, and students who made this research possible.

Thank you to my dissertation committee, Dr. Laurence Peters, Dr. Henry Smith, and Dr. Timothy Guetterman, who each made unique contributions during this process. As my professor, Dr. Henry Smith challenged me to reexamine the problem of low early reading achievement through the lens of institutionalism. Dr. Smith’s prompting led me to hone in on an under investigated problem: the institutional structures and processes underlying low early reading achievement. Later, Dr. Smith introduced me to my advisor, Dr. Laurence Peters. I am indebted to Dr. Peters for sharing his writing expertise, understanding, patience, and encouragement. I am most grateful, however, for Dr. Peter’s excitement about my work and encouragement to write a cohesive “David and Goliath Story.” Finally, through a series of Mixed Methods International Research Association workshops, I learned about mixed methods research from eminent methodologists, including my methods advisor, Dr. Timothy Guetterman. I am grateful for Dr. Guetterman’s expertise, patient guidance, and critical feedback during my proposal development, and as I conducted the research study.

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Executive Summary

Reading is a foundational learning tool and, if acquired by the end of third grade, ensures equitable access to ongoing opportunities to learn in successive grades (Gee, 2008). Federal reading policy attempts to control the technical core of the classroom (i.e., curriculum and instruction) to achieve the policy goal that 95% of all students read at a proficient level before the end of third grade (e.g., No Child Left Behind Act [NCLB], 2001). Yet, throughout the last half-century, the percentage of students who read at a proficient level after third grade lingers around 33% (National Center for Education Statistics [NCES], 2013, 2015, 2017, 2019).

The Problem of Practice

Educational policy itself proves insufficient to influence the technical core of the classroom (i.e., curriculum and instruction; Cuban, 2013; Elmore, 1996, 2008; Mehta, 2015; Shen, Gao, & Xia, 2017; Shen & Ma, 2006) and reading policy proves no exception (Coburn, 2001; Coburn, Pearson, & Woulfin, 2011). Federal reading policies mandate the use of scientifically-based reading instruction (NCLB, 2001; Reading Excellence Act [REA], 1998) and evidence-based reading curriculums (Every Student Succeeds Act [ESSA], 2015). Yet, a nationally representative survey revealed that 75% of kindergarten through second-grade teachers use reading-instruction methods that lack research foundations and evidence of effectiveness (Loewus, 2019). Likewise, an accompanying analysis revealed that the most commonly implemented reading curriculums also lack research foundations and evidence of effectiveness (Schwartz, 2019). Using an institutional lens, in reading-instruction cultures with highly institutionalized reading instruction practices, individuals and groups resist reading-policy pressures to protect existing reading-instruction practices (e.g., Thornton, Ocasio, & Lounsbury, 2012; Tolbert & Zucker, 2019).
Context

The study context, 16 small rural schools in northwest Connecticut, is compelling. Small rural schools face unique challenges in responding to federal reading policy. Policymakers ignore the unique characteristics of rural schools when crafting policies for all schools and all students (Jimerson, 2005; J. Johnson & Howley, 2015). Policy efforts with urban populations in mind are less likely to influence rural populations (Gagnon, 2016; J. Johnson & Howley, 2015; Lavalley, 2018; Sher, 2019). In Connecticut, small rural schools are accountable to the same reading-policy guidelines as their larger urban counterparts, but do not receive the same external guidance, funding, or support to comply with policy guidelines (e.g., the CT K–3 Literacy Initiative). In general, small rural schools have fewer human, social, and financial capital resources to respond to policy (Rural School and Community Trust, 2017).

Other rural-school challenges include remoteness and professional isolation (Jimerson, 2004), lack of teacher capacity (Lavalley, 2018), commitment to local control (Jimerson, 2004), resistance to change (White & Corbett, 2014), and policy bias (Brenner, 2019; DeYoung, 1987; Jimerson, 2005; J. Johnson & Howley, 2015; Lavalley, 2018; White & Corbett, 2014). These factors, together with cultural and institutional obstacles, prevent rural schools from implementing effective reading-instruction practices consistent with federal policy. Thus the focus of this dissertation study is to explore ways small rural schools resist and refract research-based reading policy to the detriment of their students.

Literature

Literature was curated using search terms surrounding the science of reading, reading ideologies, specific teacher factors, and institutionalism. Searches were conducted using multiple databases (e.g., Emeralds Insight, ERIC, Google Scholar, JSTOR, ProQuest, Sage, Springer,
Taylor & Francis, and Wiley) and mining references. Recommendations to consider seminal works came from Johns Hopkins University professors and a professional network of researchers, scholars, and activists.

Chapter 1 Conceptual Framework

In Chapter 1, a conceptual framework guided a review of peer-reviewed studies surrounding the science of reading, reading ideologies, and specific teacher factors. The conceptual framework is “dissonance is expected” in response to reading policy. Dissonance is a “lack of agreement between the truth and what people want to believe” (Dissonance, 2020, Sense 1a). In this case, dissonance emerges between a truth—the science of reading or empirically established knowledge of the components of effective reading instruction and how reading develops and should be taught—and a prevailing yet unfounded belief that young children learn to read spontaneously through implicit exposure in literate environments.

Chapter 1 Literature Review: Failure of Policy to Influence Practice

Chapter 1 provides background and situates the problem of practice in the midst of decades of controversies regarding how children learn to read and what constitutes effective reading instruction. The purpose of the chapter was to deconstruct the complex reality inside reading-instruction cultures. Literature reviewed spans between the seminal work, Learning to Read: The Great Debate (Chall, 1967), and the What Works Clearinghouse practice guide, Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (Foorman et al., 2016).

The literature revealed a “two-cultures problem” (Seidenberg, 2013, p. 347). The science of reading or research evidence of the components of effective reading instruction and how reading develops and should be taught informs the first culture. An unfounded belief that if

The literature revealed controversies surrounding the definition of skilled reading, the validity of reading research, and how reading develops and should be taught. The literature also revealed that, in reading-instruction cultures, teacher training, knowledge, access to reading research, belief, and biases influence individual and group responses to reading policy.

**Chapter 2 Needs Assessment**

A multiphase needs assessment was conducted in two kindergarten classrooms in a rural primary school in northwest Connecticut (pseudonym Northwest Primary School [NWPS]). In the first phase, a rating scale was used to evaluate the degree of alignment between the kindergarten reading curriculum implemented at NWPS and federal reading-policy guidelines to use evidence-based reading curriculums (ESSA, 2015). The second phase investigated kindergarten teachers’ ability to recognize risk for reading failure. The third phase included an observational study conducted to evaluate the degree of alignment between reading-instruction practices implemented at NWPS and federal reading-policy guidelines to use scientifically-based reading instruction (NCLB, 2001; REA, 1998).

The purpose of the needs assessment was twofold: first, to investigate how the reading-instruction culture in one rural school responded to reading-policy guidelines; second, to gain insight leading to the identification of factors in reading-instruction cultures that constrain or enable attainment of reading-policy goals. Needs assessment findings included that kindergarten
teachers are confused about how reading develops and should be taught. A second finding is that reading-instruction practices at NWPS are incoherent with reading-policy guidelines. Teacher confusion suggests that a mix of science and unfounded belief informs the reading-instruction culture at NWPS. Policy incoherence suggests that the response of NWPS’s reading-instruction culture to reading policy includes cognition and action to resist reading-policy pressures and to protect locally institutionalized reading-instruction practices.

**Chapter 3 Theoretical Framework**

Chapter 3 introduces the theoretical model that guided the dissertation study. The literature reviewed spanned 3 eras of institutionalism: old institutionalism concerned with technical efficiency (pre-1970), new institutionalism with a focus on legitimacy (1970–1990), and contemporary institutional perspectives emphasizing the interaction of structure and agency (1990-the present). The primary insight emerging from the literature was that in response to reading policy, individuals and groups in reading-instruction cultures act to either protect or transform institutionalized reading-instruction logics and practices.

Chapter 3 develops an integrated theoretical model comprising the institutional logics perspective (Thornton et al., 2012) embedded with institutional work (Lawrence & Suddaby, 2006) and organizational sensemaking perspectives (Maitlis & Christianson, 2014). When considered individually, each view explains a different aspect of how individuals and collectives embedded in highly institutionalized systems, like reading-instruction cultures, respond to reading-policy pressures. The integrated model guides an explanatory study to uncover and explain the social processes hidden in reading-instruction cultures that enable or constrain reading-policy coherence.
Policy Coherence

From a perspective outside of reading-instruction cultures, policy coherence indicates that local instruction practices appear to align with external policy goals (Alonso, 2017, emphasis mine). In reading-instruction cultures, policy coherence emerges if the cognition and action of all individuals and groups at all systems levels align with policy goals (Honig & Hatch, 2004).

Research Purpose and Objectives

The purpose of the mixed methods research study was to explain the social mechanisms underlying differences in reading-policy coherence in 16 small rural schools in Connecticut. The quantitative objective of the study was to identify the degree of coherence between classroom reading-instruction practices and reading-policy guidelines. The qualitative aim of the study was to explore the social mechanisms underlying degrees of coherence. The mixed method objective was to use qualitative results to explain the quantitative results.

Quantitative Questions

RQ1: What is the degree of coherence between reading-policy guidelines to teach reading using evidence-based curriculums and the curriculums implemented in 16 small rural school schools in Connecticut?

RQ2: What is the degree of coherence between reading-policy guidelines to teach reading using scientifically-based reading instruction and the reading-instruction practices institutionalized in 16 small rural school schools in Connecticut?

Central Qualitative Questions

RQ3: How do district leaders, principals, literacy leaders, and teachers explain variations in coherence between reading-policy guidelines and reading-instruction practices?
Qualitative Subquestions

RQ4: How do district leaders, principals, literacy leaders, and teachers describe reading-instruction practice in context?

RQ5: How do district leaders, principals, literacy leaders, and K–1 teachers indicate where complexity (conflicting logics) is located?

Mixed Method Questions

RQ6: How do district leaders’, principals’, literacy leaders’, and teachers’ descriptions of reading-instruction practices in context compare to one another?

RQ7: How do district leaders’, principals’, literacy leaders’, and teachers’ disclosure of where complexity is located compare to one another?

RQ8: In what way do the qualitative data collected from interviews with district leaders, primary school principals, literacy leaders, and K–1 teachers explain the degree of coherence between reading-policy guidelines and institutionalized reading-instruction practices in 16 small rural schools in Connecticut?

Data and Data Analysis

The study used an explanatory sequential mixed methods research design. Explanatory sequential designs are characterized by two distinct, consecutive, and interactive phases: first, a quantitative data collection and analysis phase followed by a subsequent qualitative data collection and analysis phase (Creswell & Plano Clark, 2017; Ivankova, Creswell, & Stick, 2006). Quantitative data was organized and analyzed using descriptive statistical procedures. Qualitative analysis was conducted using thematic analysis. Mixed methods analysis was conducted using cross-case analysis facilitated by joint displays.
Findings

Quantitative Results

In the first quantitative phase, two components were used to evaluate degrees of reading-policy coherence in the 16 small rural schools: curriculum reviews and structured observations. Alignment between reading curriculums and reading-policy guidelines ranged from 0% to 62.8%. Alignment between reading-instruction practices and reading-policy guidelines ranged from 33.2% to 64.8%. Results from curriculum reviews and structured observations were used to identify two extreme deviant cases: one school with higher and one school with lower degrees of policy coherence.

Qualitative Results

In the second qualitative phase, structured interviews were conducted to uncover the microfoundational processes hidden between the structural input of reading policy and the cultural output of reading-policy coherence. Interviews were conducted at multiple levels of analysis in each extreme deviant case and included superintendents, primary principals, literacy leaders, and K-1 teachers. Thematic analysis revealed different microfoundational processes linked to varying degrees of policy coherence.

Mixed Methods Results

During mixed methods analysis, qualitative and quantitative results were merged into joint displays to facilitate cross-case analysis. The cross-case analysis revealed that in the lower coherence school, microfoundational processes coalesced to decouple or divorce reading-instruction practice from reading-policy guidelines. Conversely, in the higher coherence school, microfoundational processes coalesced to achieve reconciliation between reading policy and reading-instruction practices.
Chapter 1

Introduction and Background

Chapter 1 introduces an enduring problem of practice: failure of reading policy to influence the technical core of the classroom. This chapter situates the problem in the midst of the fallout from policy failure and decades of controversies emerging from dissonance between empirical evidence of effective reading instruction and the unfounded belief that students discover reading implicitly without explicit instruction. The purpose of the chapter is to deconstruct the complex reality inside reading-instruction cultures.

Low early reading achievement persists across all student subgroups (NCES, 2013, 2015, 2017, 2019) despite accumulated evidence of effective reading instruction (e.g., Adams, 1990; Chall, 1967; Foorman et al., 2016; Gersten et al., 2008; NRP, 2000; Shanahan et al., 2010) and policies mandating implementation of effective reading instruction (ESSA, 2015; NCLB, 2001; REA, 1998). In rare instances, schools that implement an effective reading-instruction approach, meet, and sustain the national policy goal that 95% of all students, regardless of subgroup affiliation, read at a proficient level by the end of third grade (Crawford & Torgesen, 2006; Denton, Foorman, & Mathes, 2003; Fielding, Kerr, & Rosier, 2007; Hall, 2018; Torgesen, Houston, Rissman, & Kosanovich, 2007). Still, since 1971, the percentage of students who read at or above a proficient level after third grade lingers around 33% (NCES, 2013, 2015, 2017, 2019).

The reading-achievement goal for all students is proficient (ESSA, 2015; NCLB, 2001). The National Assessment of Educational Progress ranks reading achievement along a continuum of three degrees: basic, proficient, and advanced (Loomis & Bourque, 2001). Achievement at the center of the continuum, proficient, indicates students have complete mastery of the skills
necessary to read challenging material and read well enough to further their academic development. Achievement at the lower end of the continuum, basic, indicates that students have partial mastery of the skills necessary to read challenging material and do not read well enough to further their academic development. Between 1971 and 2019, the percentage of students who read below proficient and in the basic range at the end of third-grade trends around 67% (NCES, 2013, 2015, 2017, 2019).

Reading is a foundational learning tool and, once acquired, provides equitable access to ongoing opportunities to learn (Gee, 2008). Common sense holds that at the end of third grade, students transition from learning to read to reading to learn (Chall & Jacobs, 2003, p. 14). Accordingly, foundational reading instruction is available to all students in kindergarten through second grade, to some students in third grade, and to some struggling readers after third grade (e.g., Moats, 2000, 2007). Attempts at reading remediation outside of general education kindergarten through third-grade classrooms seldom result in full compensation (Blankenau & Youderian, 2015; Moody, Vaughn, Hughes, & Fischer, 2000; Torgesen, Rashotte, & Alexander, 2001; Torgesen, Rashotte, Alexander, Alexander, & MacPhee, 2003). Despite all efforts, students who fail to acquire adequate reading skill before the end of third grade rarely acquire adequate reading skill after third grade (Cunningham & Stanovich, 1997; Dougherty, 2014; Juel, 1988; Sparks, Patton, & Murdoch, 2014; Stanley, Petscher, & Catts, 2018). Absent proficient early reading skill and ongoing opportunities to learn, students lack preparation to persist through high school graduation and higher education (Fiester, 2010; Hernandez, 2011; Lesnick, Goerge, Smithgall, & Gwynne, 2010).

Low early reading achievement has enduring consequences. Young struggling readers enter adulthood without adequate reading skill (Lesgold & Welch-Ross [CLS], 2012). Since
1992, the number of adults who read below proficient trends around 95 million (CLS, 2012; Kutner, Greenberg, Jin, & Paulsen, 2006). Adults with basic and below basic reading skill qualify as functionally illiterate (Vagvolgyi, Coldea, Dresler, Schrader, & Nuerk, 2016) and lack mastery of the skills necessary to read challenging material; participate in the new knowledge economy; contribute to rather than depend on society; manage health care; or advance children’s literacy, education, and well-being (Knudsen, Heckman, Cameron, & Shonkoff, 2006; CLS, 2012; Seidenberg, 2012). Like efforts to remediate younger struggling readers, efforts to remediate older struggling readers are rarely effective (CLS, 2012; Seidenberg, 2012). Coming full circle, reading failure is intergenerationally endowed as adults who struggle to read cannot bestow on children that which they do not possess (e.g., Binks-Cantrell, Washburn, Joshi, & Hougen, 2012; Blankenau & Youderian, 2015; Bus, 2014).

**Problem of Practice**

Educational policy itself proves insufficient to influence the technical core of the classroom (i.e., curriculum and instruction; Cuban, 2013; Elmore, 1996, 2008; Mehta, 2015; Shen et al., 2017; Shen & Ma, 2006) and reading policy proves no exception (Coburn, 2001; Coburn et al., 2011). Reading policies mandate the use of scientifically based reading instruction (NCLB, 2001; REA, 1998) and evidence-based reading curriculums (ESSA, 2015).

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1 The new knowledge economy is “production and services based on knowledge-intensive activities” and “greater reliance on intellectual capabilities than on physical inputs or natural resources” (Powell & Snellman, 2004, p. 199).

2 Scientifically-based reading instruction includes the five essential components of reading instruction identified by the National Reading Panel Report (2000): phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Scientifically-based reading instruction is most effective when structured and delivered explicitly, systematically, and with varying degrees of frequency, duration, and intensity, in response to individual child variation (Foorman & Torgesen, 2001; Spear-Swerling, 2018).

3 A curriculum is evidence based when a peer-reviewed randomized control study, a quasiexperimental study, or a correlational study provides evidence that the curriculum has a statistically significant effect on improving student outcomes (ESSA, 2015; International Reading Association, 2002)
Nevertheless, a first-of-its-kind nationally representative survey revealed that 75% of kindergarten through second-grade teachers use reading-instruction methods that lack research foundations and evidence of effectiveness (Loewus, 2019). Likewise, an accompanying groundbreaking analysis revealed that the most commonly implemented reading curriculums (Baumann, 2012; Calkins & Teachers College Reading and Writing Project, 2015; Clay, 1993; Fountas & Pinnell, 2017; Houghton Mifflin Harcourt, 2020) also lack research foundations and evidence of effectiveness (Schwartz, 2019). From an institutional perspective, individuals embedded in reading-instruction cultures resist reading policy to protect locally institutionalized reading-instruction practices (e.g., Bridwell-Mitchell, 2015; Haack et al., 2019; Thornton et al., 2012; Tolbert & Zucker, 2019).

**The Problem in Context: Small Rural Schools**

Education policy is biased against rural populations (Brenner, 2019; DeYoung, 1987; Jimerson, 2005; J. Johnson & Howley, 2015; Lavalley, 2018; White & Corbett, 2014). More than 9.7 million, or about 20% of the nation’s students attend rural schools (Cicchinelli & Beesley, 2017). Like their urban counterparts, fewer rural students read at a proficient level by the end of third grade than their suburban counterparts (Graham & Teague, 2011). Yet, despite their similar plight, struggling rural students remain “invisible” to policymakers preoccupied with more “highly visible” struggling urban students (Rural School and Community Trust, 2019, p. 34). Policymakers ignore the unique characteristics of rural schools when crafting policies for all schools and all students (Jimerson, 2005; J. Johnson & Howley, 2015). As a result, policy efforts

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4 Loewus (2019) reported that 75% of kindergarten through second-grade teachers report that they use a three-cueing method to teach students to guess what unknown words might be.
with all students in mind are less likely to influence rural populations (Gagnon, 2016; J. Johnson & Howley, 2015; Lavalley, 2018; Sher, 2019).

To counteract policy bias against rural schools, ESSA (2015) includes a provision to “review the organization, structure, process, and procedures of the Department of Education for administering its programs and developing policy and regulation” applied to rural schools (Section 5005). To date, however, U.S. Department of Education efforts to increase policymaker consideration of rural schools remain unrealized (Brenner, 2019). Examples of rural policy bias occur in the dissertation context: small rural schools in northwest Connecticut.

In Connecticut, small rural schools are accountable to the same external reading policy mandates as their larger urban counterparts but do not receive the same guidance, funding, or support to implement policy initiatives. In one example, schools in Connecticut’s large urban centers are designated priority schools and are therefore eligible for grant funding to support early reading success (Connecticut General Statutes Sec. 10-266p, 2012). In a second example, the Connecticut State Department of Education responds to An Act Concerning Achieving Universal Literacy by Grade Three (Connecticut General Statutes Sec. 10-266p 5350, 2012, 2014) with funding for the Connecticut K–3 Literacy Initiative. The initiative provides outside implementation teams and systemwide supports over at least 3 years to priority schools to support the implementation of scientifically-based reading instruction using evidence-based curriculums. Small rural schools do not meet the criteria for priority-school designation and therefore do not receive guidance, funding, or support to comply with reading policy.

To Read: A Matter of Social Justice

We teach reading to equip, but also to liberate. In the scheme of human history, reading is a modern cultural innovation (e.g., Wolf, 2008). Only recently is reading a societal expectation
and a guaranteed social opportunity for all children (e.g., NCLB, 2001). In contemporary society, reading is fundamental to living a self-selected life (Knudsen et al., 2006). For those of us who read well, we read effortlessly for pleasure and the mundane. Civically, reading well prepares us to contribute to rather than depend on society (Knudsen et al., 2006). Reading well equips us to critically evaluate our lives and consequently has the power to liberate us from the circumstances of our lives (Freire, 1983). When we read, we can imagine and attain an otherwise unimaginable life. In sum, although reading is, at times, a fundamental, mundane, civic, and pleasurable act, reading is also a matter of social justice, with the power to emancipate segments of society from exclusion and confinement by oppression.

**Conceptual Framework**

The conceptual framework that guides the Chapter 1 literature review is dissonance is expected. Dissonance is a “lack of agreement between the truth and what people want to believe” (Dissonance, 2020, Sense 1a). In this case, dissonance emerges between a truth—the science of reading or empirically established knowledge of the components of effective reading instruction, how reading develops and should be taught—and a prevailing yet unfounded belief that young children learn to read spontaneously through implicit exposure in literate environments. Dissonance underlies decades of controversies surrounding the definition of skilled reading, the validity of reading research, and how reading develops and should be taught. Figure 1 provides a visual model of the conceptual framework.

**The Science of Reading**

The science of reading includes knowledge of the components of effective reading instruction and how reading develops and should be taught. This section introduces three seminal theories that explain the development of early reading during specific relational interactions,
over time from birth to the end of third grade, and as a complex cognitive process influenced by psychological and ecological processes. A description of the third element of the science of reading, knowledge of the components of effective reading instruction, follows. Knowledge of the science of reading guides a critical evaluation of the dissonance between truth and unfounded belief that emerges in the literature.

Figure 1. Conceptual framework: Dissonance is expected.

**Sociocultural-Learning Theory**

Sociocultural-learning theory advances the notion that learning occurs as children are socially supported to interact with people, objects, and experiences in their immediate environments (Cobb & Bowers, 1999; Gee, 2008; McCarthy, 1929; Vygotsky, 1978). In contrast to maturational assumptions that development proceeds learning (e.g., Erikson, Gesell, Piaget),
sociocultural-learning theorists assert that learning spurs development. Central theoretical principles include the role of the more knowledgeable other, the dynamic nature of social support in a zone of proximal development, and the use of mediating tools to facilitate learning.

In schools, the zone of proximal development exists as a range between two measures (Vygotsky, 1978). The first measure derives through standardized testing and provides a retrospective benchmark, indicating what students have internalized and are capable of doing independently. The second measure derives through performance assessment, represents what students are capable of when supported to practice by a more knowledgeable other, and provides a prospective indication of what children will soon internalize and do independently (Bransford, Brown, & Cockings, 2000; Gee, 2008; Vygotsky, 1978).

In their zone of proximal development, more knowledgeable others support learners to practice through the use of scaffolds and the provision of mediating tools (Bransford et al., 2000; Gee, 2008; Resnick, 1987; Vygotsky, 1978). Scaffolds are supportive structures that are first provided intensely, then gradually faded, and eventually withdrawn as learners approach and attain mastery (Bransford et al., 2000; Gee, 2008; Niedenthal & Alibali, 2009; Vygotsky, 1978). In their zone of proximal development, learners appropriate mediating tools or objects, devices, technologies, language, and people to practice that which they could not practice without a mediating tool (Gee, 2008). Significantly, once acquired by the end of third grade, reading is an essential mediating tool that provides equitable access to ongoing learning in successive grades (Gee, 2008).

Analyzed through a sociocultural lens, reading success or failure emanates from the interaction between students and the reading-instruction practices available in the local reading-instruction culture (Dudley-Marling, 2004). In schools, literacy educators “affiliate” with the
“attitudes, values, and norms … required” in local reading-instruction cultures (Gee, 2001, p. xviii). Most reading-instruction cultures affiliate, to some degree, with the unfounded belief that children discover reading implicitly without direct instruction (Loewus, 2019; Moats, 2000, 2007; Schwartz, 2019). Thus, from a sociocultural perspective, low early reading achievement emanates not from a student-skill crisis but from an educator-affiliation crisis.

**Emergent-Literacy Theory**

Emergent-literacy theorists counter maturational assumptions that literacy development begins only after the onset of conventional reading instruction, with evidence that children acquire a range of reading-related knowledge and skills in pre-school settings that act as precursors to conventional reading development in school settings (Lonigan, Schatschneider, & Westberg, 2008; Senechal, 2007; Whitehurst & Lonigan, 1998). Primary theoretical assumptions include that literacy and language develop separately (e.g., Lonigan, Burgess, & Anthony, 2000; Senechal, 2007; Whitehurst et al., 1994) and that the beginning reader is challenged to “relate a new code, a written script, to an existing code, spoken language” (Seidenberg, 2013, p. 331).

In the seminal report, *Developing Early Literacy: Report of the National Early Literacy Panel*, Lonigan and Shanahan (2009), outlined evidence of emergent literacy skills. In 2002, the National Early Literacy Panel conducted a meta-analysis of research to “establish which early skills or abilities could properly be said to be the precursors of later literacy achievement” (Lonigan & Shanahan, 2009, p. 4). Panel members considered more than 8,000 reading research studies to identify correlations between emergent-literacy skills (acquired pre-school) and conventional-literacy skills (acquired in school). In the end, 500 studies met the criteria for inclusion and informed the report (Lonigan & Shanahan, 2009). The National Early Literacy Panel (2008) identified 11 elements of emergent-literacy development that predict later
conventional-literacy development. The panel concluded that instruction in pre-school
environments strengthens emergent-literacy development. Panel findings effectively discredited
reading readiness ideas about waiting until children are developmentally ready or at least 6.5
years old to begin reading instruction (e.g., Morphett & Washburne, 1931).

Analyzed through an emergent-literacy lens, reading success or failure emanates from a
gap between children’s pre-school skills and in-school expectations that prevent students from
interacting profitably with available reading instruction. Educator’s actions to detect and backfill
gaps in emergent-literacy skills before conventional-reading instruction is effective, enduring
(Lonigan et al., 2003; Markovitz, Hernandez, Hedberg, & Silberglitt, 2015), and accomplished
From an emergent-literacy perspective, low early reading achievement emanates not from an
inability to learn to read, but from the failure of the local reading-instruction culture to isolate
and remediate individual features of emergent literacy before providing conventional reading
instruction.

The Component Model of Reading

The component model of reading adds dimensions of complexity to the simple view of
reading. The simple view of reading asserts that skilled reading emanates from the cognitive
domain and is the product of two components: decoding, or the use of letter–sound
correspondence rules, and linguistic comprehension, or the use of words to derive meaning
that reading development is more complex and involves three interrelated domains: cognitive,
psychological, and ecological.
Although the cognitive domain independently supports the development of skilled reading, individuals can fail to acquire adequate reading skills because of a deficit in any component of any of the three reading domains (Aaron, Joshi, Gooden, & Bentum, 2008; Joshi & Aaron, 2000). The cognitive domain has two components: word recognition and comprehension. The psychological domain has the multiple components of motivation, interest, locus of control, learned helplessness, teacher expectations, learning style, and gender differences. Likewise, the ecological domain has the multiple components of home environment, culture, parental involvement, classroom environment, dialect, and English as a second language (Aaron et al., 2008, p. 69).

The component model of reading theory links assessment to instruction (Joshi & Aaron, 2000). The primary argument is that the common practice of limiting assessment of reading to one domain—cognitive—and two components—decoding and comprehension—fails to account for the many other components underlying variation in reading skill. If educators use diagnostic tools to precisely understand student variation across all components (McDonald-Connor, Morrison, Fishman, Schatschneider, & Underwood, 2007), and then precisely individualize effective reading instruction beginning in the first few weeks of kindergarten (Al Otaiba et al., 2014), persisting as needed through third-grade (McDonald-Connor, Morrison, Fishman, Crowe, Al Otaiba, & Schatschneider, 2013), students’ opportunities to interact profitably with reading instruction are optimized and reading achievement dramatically improves (Connor & Morrison, 2016; McDonald-Connor et al., 2007, 2009). From a component-model-of-reading perspective, it is logical, therefore, that failure to precisely individualize reading instruction limits children’s ability to interact profitably with available reading instruction, and negatively impacts reading achievement.
Considering individually, each theory provides an understanding of distinct aspects of the science of reading, how reading develops and should be taught. Sociocultural learning theory explains how uniquely timed, and specialized social interactions support reading development. Emergent literacy theory offers a framework regarding the development of essential early literacy precursors before school entry. The component model of reading framework recognizes the impact of psychological and ecological factors on the cognitive process of learning to read. Considered jointly, these perspectives provide a comprehensive understanding of early literacy development as a complex and dynamic process occurring along a continuum that spans between birth and under nine-years-old. The next section details the third element of the science of reading, the components of effective reading instruction.

**Effective Reading Instruction**

Reading failure is prevented when educators provide effective reading instruction in general-education kindergarten through third-grade classrooms (Foorman & Torgesen, 2001; Foorman & Wanzek, 2016; Snow, Burns, & Griffin, 1998; Torgesen, 1998, 2000). Effective reading instruction concurrently incorporates two interrelated sets of skills: foundational reading skills and reading-comprehension skills (Foorman et al., 2016). Foundational reading skills include phonemic awareness, phonemic decoding skills, fluency in word recognition and text processing, oral language vocabulary and skills, and spelling and writing skills (Foorman et al., 2016; NRP, 2000). Comprehension skills are undergirded by foundational reading skills and include broad conceptual knowledge, text-comprehension skills, thinking and reasoning skills, and motivation and engagement (Shanahan et al., 2010).

Reading instruction is most effective when it is explicit (includes explanations, demonstrations, and gradually faded guidance), systematic (logically ordered from simple to
complex), cumulative (new teaching builds from previous learning), and responsively
differentiated (with precisely individualized variation in duration, frequency, and intensity)
begins in the first few weeks of kindergarten and persisting through the end of third grade (Al
Otaiba et al., 2014; N. L. Cooke, Kretlow, & Helf, 2009; Simmons et al., 2008, 2007; Vellutino,
Scanlon, Small, & Fanuele, 2006). Significantly, in places where schools implement effective
reading instruction, almost all students, regardless of subgroup affiliation and individual
variation at school entry, learn to read during the first few years of instruction (e.g., I. S. Brown
& Felton, 1990; Fielding et al., 2007; Foorman, Francis, Fletcher, Schatschneider, & Mehta,
1998; Shapiro & Solity, 2008; Torgesen, 2000; Torgesen et al., 1999; Torgesen, Rashotte,
Mathes, et al., 2003; Vellutino et al., 1996).

A Two-Cultures Problem

The literature revealed a “two-cultures problem” underlying the failure of reading policy
to influence the technical core of the classroom (i.e., curriculum and instruction; Seidenberg,
2013, p. 347). The science of reading informs reading policy (ESSA, 2015; NCLB, 2001; REA,
1998). In contrast, unfounded beliefs inform reading-instruction cultures, at least in part (Moats,
2000, 2007). Controversies between the two cultures surround the definition of skilled reading,
the validity of reading research, and how reading develops and should be taught.

Controversies Surrounding the Definition of Skilled Reading

Skilled reading is defined differently by advocates of two opposing reading-instruction
cultures. Meaning-emphasis ideologists describe skilled reading as a “psycholinguistic guessing
game” or the rapid selection of the “fewest, most productive cues necessary” to guess unknown
words (Goodman, 2014, p. 117). In contrast, code-emphasis ideologists assert that educators
challenge beginning readers to “relate a new code, a written script, to an existing code, spoken
language” (Seidenberg, 2013, p. 331). Accordingly, skilled reading is the product of two separate but interrelated sets of skills: decoding, or the use of letter–sound correspondence rules to identify words, and linguistic comprehension or the use of words to derive meaning (Gough & Tunmer, 1986; Hoover & Gough, 1990).

**Historical Persistence of a Flawed Definition of Reading**

The meaning-emphasis approach is an empirically disproven belief system (e.g., Ardoin, Binder, Zawoyski, Foster, & Blevins, 2013; Jeynes & Littell, 2000; Nicholson, 1986; Nicholson, Bailey, & McArthur, 1991; Nicholson, Lillas, & Rzoska, 1988; Raynor, Foorman, Perfetti, Pesetsky, & Seidenberg, 2001; Raynor & Pollatsek, 1989). The approach emerges from a single empirically flawed study and the false claim that there is a 60–80% improvement in word identification when words are read in context rather than in isolation (Goodman, 1965). The approach first gained traction as a grassroots teacher-empowerment movement in the 1970s, rose to prominence in the 1980s and 1990s, and remains ubiquitous today (Brady, Braze, & Fowler, 2011; Kim, 2008; Loewus, 2019; Moats, 2000, 2007; Pearson, 2004; Seidenberg, 2017).

Despite negating evidence, the meaning-emphasis approach remains endorsed by state education agencies under the guise of balanced reading (Moats, 2000, 2007). The approach is actively disseminated by teacher-training institutions and instructors (Greenberg, McKee, & Walsh, 2013; Loewus, 2019; Rickenbrode, Drake, Pomerance, & Walsh, 2018; Walsh, Glaser, & Wilcox, 2006), major textbook publishers (e.g., Heinemann, Houghton Mifflin Harcourt,

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5 Balanced reading is emergent and poorly defined. A review of the literature reveals that balanced reading is sometimes described as simultaneously combining skill-based and meaning-based instruction (Pressley, 2002) with teacher-initiated and student-initiated activities (Spiegel, 1994), daily individual differentiation (Spiegel, 1998), and as initial-code-emphasis instruction followed by instruction to develop expert skill development (Castles, Rastle, & Nation, 2018). Teachers’ interpretation, understanding, beliefs, and implementation of balanced reading instruction varies widely (Bingham & Hall-Kenyon, 2013).
Pearson), professional-development events (e.g., Heinemann, Literacies and Language for All), websites (e.g., www2.ncte.org, www.unitsofstudy.com), teacher journals (e.g., *Research in the Teaching of English, Literacy, and Teaching of Learning*), and a national teacher organization (The National Council of Teachers of English [NCTE]). An example of effective dissemination of the meaning-emphasis approach by a national teacher organization is found in small rural schools.

Recently, meaning-emphasis ideologists gained a federally funded foothold in small rural schools. In 2014, the Rural School and Community Trust, in partnership with the Institute for Educational Leadership and the NCTE, won a $4.6-million federal Innovative Approach to Literacy Grant. NCTE’s expertise in meaning-emphasis reading instruction and position on reading informed the partnership in that “reading instruction must focus primarily on meaning … and … an overemphasis on words, letters, and sounds misleads developing readers” (NCTE, 2019, para. 4). Throughout the literature surrounding the partnership’s efforts, meaning-emphasis instruction is inaccurately referenced as evidence-based.

Grant money funded implementation of the Literacy Innovation in Rural Education Through Innovation and Collaboration (LIREC) in 21 rural schools across five states. LIREC is described by the partnership as a rural-specific place-based approach to improve early literacy at all systems levels. The University of Chicago’s Literacy Organization Capacity Initiative promoted LIREC to prioritize building teacher capacity, establishing local control, and resisting efforts to achieve policy compliance (C. Nelson & Dunmore, 2018). Although Google and Google Scholar searches failed to reveal evaluations of LIREC’s efficacy, the University of Chicago’s Literacy Organization Capacity Initiative and The Rural School and Community Trust offered to support more rural schools to implement LIREC.
The meaning-emphasis approach lacks empirical evidence of effectiveness. In contrast, a canon of empirical evidence converges to prove the effectiveness of code-emphasis reading instruction. Meaning-emphasis ideologists criticize and reject reading research evidence. Code-emphasis ideologists warn that implementing meaning-emphasis instruction is harmful. The next sections review the evidence and the controversies.

Reading Research Evidence

The following review of reading research is organized into two overlapping eras. The first era includes the period between Chall’s (1967) seminal work, *Learning to Read: The Great Debate*, and the decade surrounding the publication of the *National Reading Panel Report: Teaching Children to Read* (NRP, 2000). The NRP report is accepted as a representational synthesis of the canon of reading-research evidence that emerged before 2000 (Foorman et al., 2016). During the first era, reading research converged to provide evidence of effective reading instruction. The second era of reading research included the period between the publication of the NRP report and the publication of *Foundational Skills to Support Reading for Understanding in Kindergarten through 3rd Grade* (Foorman et al., 2016). The Foundational Skills report is accepted as a representational synthesis of the canon of reading-research evidence that emerged after the NRP report (2000; Forman et al., 2016). During the second era, reading research interrogates, validates, and extends NRP findings.

Reading research is vast, robust, and telling. In response to a 1997 congressional mandate, then-Secretary of Education Riley and the National Institute of Child Health and Human Development assembled a panel of reading experts to conduct a meta-analysis of the research surrounding teaching young children to read. The NRP considered more than 15,000 reading-research studies conducted before 1966 and more than 100,000 reading-research studies
conducted between 1966 and 1999. Ultimately, 432 studies met the criteria for study inclusion and informed the report. Primary findings included identification of the components of effective reading instruction, including phonemic awareness, phonemic decoding skills, fluency in word recognition and text processing, oral language vocabulary and skill, and spelling and writing skills (NRP, 2000). Other seminal reading-research reports echo NRP findings (e.g., Adams, 1990; Anderson, Heibert, Scott, & Wilkson, 1985; Armbruster, 2010; Lonigan & Shanahan, 2009; Shanahan et al., 2010; Snow, 2002; Snow et al., 1998; Torgesen, 2004a; Wanzek & Vaughn, 2007). Findings from the first era of reading research are contested, in particular, the NRP report.

Criticism of the NRP (2000) first ignited in a minority view written by NRP panelist Yatvin (2000) and published as an addendum to the NRP report. Yatvin, an educator, questioned the adequacy of panel-member expertise and stated the panel did not sufficiently answer questions put forth by Congress. Additionally, Yatvin asserted that the NRP report was narrowly conceptualized to align with the code-emphasis ideology that dominated the panel, in opposition to her meaning-emphasis ideology. In later complaints, Yatvin stated that the NRP was not exhaustive or objective, and was used to misappropriate federal funds, to advance one-sided research and political agendas, and to force teacher-preparation institutions and early reading educators to conform to a narrow and flawed code-emphasis ideology. Additionally, Yatvin insisted that school conditions and child-level variations make code-emphasis reading instruction in regular-education classrooms impossible (Yatvin, 2003). Other equally vocal meaning-emphasis ideologists echoed Yatvin’s criticisms (e.g., Allington, 2002; Coles, 2003; Garan, 2002; Krashen, 2001). The second era of reading research emerged during criticism of the NRP report.
Findings from robust international research reviews converged in the second reading-research era to reconfirm and extend first-era reading-research findings (e.g., Foorman et al., 2016; Gersten et al., 2008; Rose, 2005; Rowe, 2005; Snow, Griffin, & Burns, 2007; Torgerson, Brooks, Gascoine, & Higgins, 2019; Wanzek & Vaughn, 2007). In addition to validating the components of effective reading instruction (e.g., Foorman et al., 2016; Shanahan et al., 2010), second-era research emphasizes the need to responsively and precisely individualize the intensity, frequency, and duration of effective reading instruction (e.g., Gersten et al., 2008), and to prepare teachers with knowledge of the science of reading and the capacity to implement effective reading instruction (e.g., Rose, 2005). Neuroscientific studies of reading development emerged during the second era of reading research and uniquely illustrate the effectiveness of code-emphasis instruction and the danger of meaning-emphasis instruction.

**Neuroscientific Evidence**

Neuroscientific reading research is complex, specialized, and emerging. Therefore, the overview of neuroscientific evidence presented here provides a simple explanation to help readers understand how the visualization of neural reading signatures uniquely confirms and extends reading research. Neuroscientists use noninvasive brain-imaging methods to visualize and map the neural signature of reading before, during, and after reading instruction. Findings include that humans lack a genetic predisposition or dedicated brain structure and function for reading (Dehaene, 2009). Consequently, reading occurs through a process of *exaptation*, or activation, recycling, and modification of existing brain structures and functions (Dehaene, 2009, 2011, 2014; Dehaene, Cohen, Morais, & Kolinsky, 2015; Dehaene et al., 2010). Brain structures and functions exapted to read include those involved in “early vision, letter analysis, phonological analysis, and their reciprocal interconnections” (Dehaene et al., 2015, p. 234). Typical and
disabled readers use different behaviors to read, and as a result, exapt different brain structures and functions to read (Pugh, Sandak, Frost, Moore, & Mencl, 2006). Brain-imaging studies of typical and disabled readers reveal different neurobiological signatures of reading.

In the beginning stages of reading, typically developing readers rely on letter-sound associations to read (Perfetti, 1985). As a result, typically developing readers exapt two interacting brain structures in the left-brain hemisphere, the spoken-language area, and the visual-word-form area (Dehaene, 2009, 2011). Over time, typical readers also generate neural models of previously decoded words that they store and retrieve effortlessly and rapidly from the occipital-temporal region. The pattern of creating, storing, and retrieving neural models of words is referenced as orthographic mapping. Neuroscientists describe the neurobiological signature of readers who rely on letter-sound associations and orthographic mapping to read as normalized.

In contrast, atypically developing readers rely on context cues, guessing, and after repeated exposure, whole-word memorization and recognition to read (Perfetti, 1985). This behavior fails to exapt the spoken language and visual word form areas in the left-brain hemisphere and instead exapts various brain structures in the right-brain hemisphere (Pugh et al., 2006). Neuroscientists describe the neurobiological signature of atypically developing readers as compensating. Over time, the neural networks exapted by compensating readers do not strengthen or operate more efficiently, and trying to read remains laborious.

Neuroimaging studies provide evidence of a promising finding. When readers with compensating neurobiological signatures are taught to read using code-emphasis instruction, their neural signature may normalize (Aylward et al., 2003; Dehaene, 2009, 2011, 2014; Dehaene et al., 2010; B. A. Shaywitz et al., 2004; Simos et al., 2002, 2007; Temple et al., 2003). After normalization, brain-imaging studies of struggling readers more closely resemble those of fluent readers.
Two important themes emerge from the first and second reading-research eras. First, the science of reading or empirical evidence of the components of effective reading instruction and how reading develops and should be taught informs effective reading instruction. The second is a strong caution against relying on meaning-emphasis reading instruction. The warning is articulated in *Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade*, a practice guide accepted as a representational synthesis of the canon of reading research evidence that emerged after the NRP (2000).

The panel discourages teachers from allowing students to use guessing strategies to identify unfamiliar words, because these will not be effective with more-advanced texts. For example, discourage students from guessing unknown words using beginning letters or pictures. The panel also cautions against giving hints that encourage students to guess a word as if answering a riddle (e.g., “What do you call the place where you live?” if students cannot make sense of the letters *h-o-m-e*). (Foorman et al., 2016, p. 34)

As confirmation, neuroscientists observed that meaning-emphasis reading instruction activates the same right-hemisphere brain structures used by neurobiologically impaired dyslexics (Dehaene, 2009). The eminent neuroscientist Dehaene (2009) explicitly warned that meaning-emphasis reading instruction at least slows and may impair reading development in typically and atypically developing readers.

**Scarce Rural-Specific Reading Research**

Empirically sound rural-education research is scarce (Arnold, Newman, Gaddy, & Dean, 2005), minimally funded (Sherwood, 2000), and narrowly restricted to rural-specific journals (Biddle & Azano, 2016). The most exhaustive review of rural-education research to date considered 716 studies published between 1991 and 2003 (Arnold et al., 2005). Of the 716
studies, a mere 10 met the study criteria for high-quality research, and of those, only two focused on reading development in rural settings (Arnold et al., 2005). As a follow up to Arnold et al., Cicchinelli and Barley (2010) located 23 high-quality rural-specific research reports published between 2005 and 2010, none of which focused on reading development in rural settings. More recently, in answer to a query, the Regional Education Laboratory Program (2019) followed their standardized search protocol and located 17 rural-specific research reports published between 2016 and 2018, none of which focused on reading development in rural settings (Institute of Educational Sciences, 2018). Without rural-specific reading research, the condition of reading instruction in rural schools is misunderstood and outmoded, and empirically refuted ideas about reading instruction persist undisrupted (e.g., Lavalley, 2018).

Disagreements About How Reading Develops and Should be Taught

Meaning- and code-emphasis ideologists disagree about how reading develops and should be taught. They distinguish between the code-emphasis practice of word identification and the meaning-emphasis practice or word recognition. To identify is to gather evidence of identity (Identify, 2020). To recognize is to perceive something previously known (Recognize, 2020). The code-emphasis practice of word identification requires an accumulation of skill and a forensic approach. In contrast, the meaning-emphasis practice of word recognition requires guessing and memorization.

6 Arnold et al. (2005) used eight high-quality research criteria developed by Mid-Continent Research for Education and Learning for research synthesis (a) construct validity of the intervention, (b) fidelity of implementing the intervention, (c) construct validity of the outcome measures, (d) internal validity of the participant assignment, (e) contamination threats to internal validity, (f) sampling threats to external validity, (g) external validity-testing within subgroups, and (h) statistical validity, evidenced by effect-size estimation and completeness of reporting (p. 9).
Meaning-Emphasis Beliefs

Meaning-emphasis ideologists believe that if students are socially supported in literature-rich environments, students will implicitly discover reading without direct instruction (Goodman, 1971, 1986; Gray, 1948; Smith & Goodman, 1971). Meaning-emphasis ideologists assert that developing and established readers use the same skills to recognize words and immediately comprehend what they read (Goodman, 1967; Smith & Goodman, 1971).

In a meaning-emphasis approach, the act of skilled reading means the rapid selection of the “fewest, most productive cues necessary to produce guesses” (Goodman, 2014, p. 117). Accordingly, meaning-emphasis reading instruction prompts students to integrate three cueing mechanisms to support guessing, including semantic cues (i.e., a prediction based on meaning from illustrations or what was already read), syntactic cues (i.e., intuitive knowledge of grammatical structures that limit possible guesses), and graphophonemic cues (i.e., letter–sound association). Educators teach students to use cues ordered from most to the least helpful: first context cues, then syntax, followed by semantics, and finally graphophonemic cues. Notably, meaning-emphasis advocates describe the use of letter–sound association cues as disruptive to students’ discovery of reading and limited to a last resort after repeated prompting to use context, syntactic, and semantic cues fails to stimulate a reasonable guess (Smith, 2006).

Code-Emphasis Understandings

Code-emphasis ideologists understand that beginning readers are “challenged” to “relate a new code, a written script, to an existing code, spoken language” (Seidenberg, 2013, p. 331). Code-emphasis ideologists assert that students learn to read if they are first supported to develop phonemic awareness (i.e., the ability to isolate and manipulate individual phonemes or sounds), followed by explicit instruction in the alphabetic principle (i.e., the use of graphemes or letters to
represent phonemes or sounds), synthetic phonics (i.e., training to convert letters into sounds and to blend sounds into words), and comprehension (e.g., Foorman et al., 2016; NRP, 2000). Code-emphasis ideologists stress that reading instruction needs to go beyond foundational skill development to explicitly teach expert reading skills (Castles et al., 2018; Foorman et al., 2016; NRP, 2000; K. E. Stanovich, 2000). Expert reading skills include orthographic mapping (i.e., mental process used to store previously decoded words for immediate and effortless retrieval), morphological understanding (i.e., knowledge of meaningful word segments, e.g., Greek and Latin roots), and advanced vocabulary and comprehension skills.

In opposition to the meaning-emphasis belief that novice and established readers use the same skills to recognize words (cues, guessing, and after repeated exposure, memorization and recognition), code-emphasis ideologists understand that as readers gain experience, they use different skills to identify words. In the first year or so of code-emphasis instruction, students master constrained reading skills and begin to develop unconstrained reading skills (Paris, 2005). Students master constrained skills quickly, and constrained skills do not need ongoing teaching, undergird unconstrained skill development, and include phonemic awareness, alphabetic knowledge, and oral reading fluency. Unconstrained reading skills develop alongside constrained skills, but are never wholly mastered, need to be continually taught, increase in sophistication over time, and include vocabulary and comprehension.

In contrast to the meaning-emphasis belief that novice and expert readers immediately comprehend what they read, code-emphasis ideologists understand that as reading becomes more fluent and automatic, reading comprehension increases (Ehri, 2005; Kilpatrick, 2015; Seidenberg, 2017; K. E. Stanovich, 2000). Code-emphasis ideologists explain that during the first year or so of instruction, the word-identification skills used by novice readers, synthetic
decoding, or the use of letter–sound associations and blending to identify unknown words, is
painstaking, effortful, consumes cognitive capacity, and therefore hampers comprehension
(Shanahan et al., 2010). In contrast, the word-identification skills used by more developed
readers, synthetic decoding to identify unknown words and orthographic mapping to rapidly and
effortlessly retrieve known words, becomes more automatic and fluent, frees cognitive capacity,
and therefore, supports comprehension (Ehri, 2005; Kilpatrick, 2015; Seidenberg, 2017).

Highly Institutionalized Reading-Instruction Practices

Regardless of cultural affiliation, truth, or unfounded belief, reading-instruction practices
are highly institutionalized. Highly institutionalized instruction practices “are easily transmitted
to newcomers, are maintained over long periods of time without further justification or elaboration,
and are highly resistant to change” (Zucker, 1987, p. 446). In instructional cultures with highly
institutionalized instruction practices, educators systematically ignore or reject other approaches
to instruction, including more technically efficient approaches with better outcomes (Shulman &
Mosak, 1998; Zucker, 1987). To maintain professional legitimacy7 while ignoring and rejecting
more technically efficient instructional approaches, educators practice “ideological renegotiation”
(e.g., LaDuke, 2009, p. 39) or appropriate the language of effective instruction to describe existing
ideologies and instructional practices without altering existing ideologies and instructional
practices (e.g., Coburn, 2004; Cuban, 1993; DiMaggio & Powell, 1983; Elmore, 1996; Meyer &
Rowan, 1977; Moats, 2007; Oliver, 1991; Spillane, 2000; Spillane & Zeuli, 1999).

7 Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or
appropriate in some socially constructed system of norms, values, beliefs, and definitions (Suchman, 1995, p. 574).
Instructional Casualties

Reading researchers colloquially reference struggling readers as instructional casualties (Gickling & Thompson, 1985; Lyon, 2011; Simmons & Kameenui, 1998; Snow et al., 1998; Boulton, 2003b) and alternatively, instructional dyslexics (Seidenberg, 2012). Instructional casualties are students taught with ineffective reading instruction who present as dyslexic, but who do not have dyslexia (Boulton, 2003b). The International Dyslexia Association defined true dyslexia as

A specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (Dyslexia Working Group, 2002, para. 1)

About 95% of students who fail to read with proficiency at the end of third grade are instructional casualties (Lyon, 2011). Unlike true dyslexics, when teachers provide effective reading instruction to instructional casualties, their reading achievement improves rapidly and dramatically (Aylward et al., 2003; Dehaene, 2009, 2011, 2014; Dehaene et al., 2010; Seidenberg, 2012; B. A. Shaywitz et al., 2004; Simos et al., 2002, 2007; Temple et al., 2003). Reading-instruction casualties emerge from reading-instruction confusion. In an interview, Whitehurst, past Director of the Institute of Educational Science, Assistant Secretary of Education, and Senior Fellow at the Brookings Institute, described instructional confusion:

Sample first or second grade classrooms around the country and … despite what we know about the process of reading and have learned over the past twenty years, you will still find that teachers for a first grader who is struggling to sound out a word … will discourage the child from doing that, and encourage the child to look at the pictures in the book and guess what that word means. Good readers don’t guess, good readers sound out almost every word on the page. So, the teacher is saying you solve the task this way when in fact the task has to be solved in an entirely different way. That cannot help but confuse children. (Boulton, 2003a, para.19)
For instructional casualties, reading disability is not carried to school as a “pathology that resides in the heads of individual students,” but instead is socially constructed in the relationship between students and the reading-instruction activities institutionalized in the local school (Dudley-Marling, 2004, p. 482).

**Teacher Training, Knowledge, Beliefs, and Biases**

In reading-instruction cultures, teacher training, knowledge, access to research evidence, beliefs, and biases influence responses to reading policy.

**Teacher knowledge**

To teach reading effectively, teachers need knowledge of the science of reading or the components of effective reading instruction, how learning to read occurs, and how to teach reading (e.g., Cunningham, Perry, Stanovich, & Stanovich, 2004; Foorman et al., 1998; Lyon & Weiser, 2009; Moats, 1999, 2004, 2009; Moats & Lyon, 1996; Morris, 2015; Piasta, Connor, Fishman, & Morrison, 2009; Podhajski, Mather, Nathan, & Sammons, 2009). Teacher knowledge of the science of reading positively correlates to student reading achievement (e.g., Al Otaiba & Lake, 2007; Brady & Moats, 1997; Connor et al., 2009; Darling-Hammond, 2000; McCutchen et al., 2002; Piasta et al., 2009; Snow et al., 2007) and teacher ability to implement effective reading instruction (Joshi et al., 2009b; Piasta et al., 2009). Yet, most kindergarten through third-grade teachers lack adequate knowledge of the science of reading (e.g., Bos, Mather, Dickson, Podhajski, & Chard, 2001; Cunningham & O’Donnell, 2015; Martinussen, Ferrari, Aitken, & Willows, 2015; McCutchen et al., 2002; Moats, 1994; Spear-Swerling & Brucker, 2003; Washburn, Joshi, & Binks-Cantrell, 2011).
Teacher Knowledge in Context

Throughout Connecticut, teacher knowledge of the science of reading misalign with the principles of effective reading instruction articulated in *The Connecticut Blueprint for Reading Achievement* (Connecticut State Department of Education [Blueprint], 2000) and echoed in the NRP Report (2000). A segment of Connecticut kindergarten through third-grade teachers completed a survey comprising 60 items drawn directly from the Blueprint (McCombes-Tolis & Feinn, 2008). Significant results included that 75% of respondents incorrectly identified reading skills developed in kindergarten and first grade, and 50% mistakenly identify reading skills developed in second and third grade. Many respondents indicated poor understanding of language, reading, spelling, and writing development, structural analysis of words, morphology, fluency development, formative assessment, how to administer and interpret reading assessments, choose interventions that align with assessment results, and identify and respond to students at risk for reading failure. Other studies conducted in Connecticut to investigate teacher knowledge of the science of reading concurred that many Connecticut teachers lack knowledge of the science of reading (Brady et al., 2009; Cheesman, McGuire, Shankweiler, & Coyne, 2009; Spear-Swerling & Brucker, 2003; Spear-Swerling, Brucker, & Alfano, 2005).

Absent knowledge to critically evaluate the effectiveness of instructional practices, teachers accept the instruction practices institutionalized where they first teach (Dunning, 2011). Under these circumstances, most teachers appropriate meaning-emphasis reading instruction either alone, or as part of a balanced readings program, with some combination of meaning- and

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8 Balanced reading is emergent and poorly defined. A review of the literature reveals that balanced reading is sometimes defined as simultaneously combining skill-based and meaning-based instruction (Pressley, 2002) with teacher-initiated and student-initiated activities (Spiegel, 1994), daily individual differentiation (Spiegel, 1998), and as initial code-emphasis instruction followed by instruction to develop expert skill development (Castles et al.,
code-emphasis instruction (Cunningham et al., 2009). Lack of self-efficacy surrounding code-emphasis instruction, early experiences learning to read in a meaning-emphasis reading instruction culture, resulting implicitly held bias about how learning to read occurs, and professional consensus informed by anecdotal evidence influences teachers’ unquestioning acceptance of meaning-emphasis instruction (Binks-Cantrell et al., 2012).

**Teacher Preparation**

Teacher-training institutions fail to prepare teachers with adequate knowledge of the science of reading and the capacity to implement effective reading instruction (Greenberg et al., 2013; Joshi, Binks, Graham, Ocker-Dean, Smith, & Boulware-Gooden, 2009a, 2009b; Salinger et al., 2010; Steiner & Rosen, 2004; Walsh et al., 2006; Washburn, Binks-Cantrell, Joshi, Martin-Chang, & Arrow, 2016). The National Council on Teacher Quality (NCTQ) regularly investigates what teacher candidates learn about the science of reading in undergraduate and graduate teacher-training programs (e.g., Greenberg et al., 2013; Rickenbrode et al., 2018; Walsh et al., 2006).

For example, the NCTQ examined reading-course syllabi, learning objectives, and textbooks from a nationally representative sample of 223 courses across teacher-training programs in 72 high ranking colleges and universities. Results included that although 11 schools taught all five components of effective reading instruction, 21 did not teach any, and the remaining 40 taught between one and four. Significantly, only four of the 231 textbooks examined referenced all components of effective reading instruction, and those four textbooks were used in just 11 of 223 courses. Subsequent *Teacher Prep Reviews* conducted by NCTQ

Teachers’ interpretations, understanding, beliefs, and implementation of balanced-reading instruction varies widely (Bingham & Hall-Kenyon, 2013).
showed that 71% of undergraduate (Greenberg et al., 2013) and 71% of graduate teacher-training institutions (Rickenbrode et al., 2018) still fail to equip teachers with knowledge of all components of effective reading instruction.

One explanation is that teacher educators lack knowledge of the science of reading (Loewus, 2019; Malatesha Joshi et al., 2009) and, therefore cannot equip teaching candidates with knowledge they do not possess (Binks-Cantrell et al., 2012). As a result, teacher educators de-emphasize code-emphasis instruction to overemphasize meaning-emphasis instruction (Loewus, 2019; Pressley, 2002). Teacher prioritization of meaning-emphasis instruction is significant because,

> teachers are likely to use what they learn in college and to adopt the beliefs of those who prepare them, implying that preservice preparation has the potential to directly influence outcomes for students who are having difficulty learning to read. (Denton, Vaughn, & Fletcher, 2003, p. 206)

**Connecticut Teacher Training**

Connecticut policy mandates that primary teacher-training courses include the science of reading, as outlined in the Blueprint (2000; Connecticut Public Act 11-85, 2004). The Blueprint provides a “general overview of basic research findings about reading, including the nature of skilled reading, the competencies important in reading achievement, and the components of comprehensive, high-quality curriculum of reading instruction” (CSDE, 2000, p. vi). Two years after the enactment of Public Act 11-85, however, the two Connecticut teacher-preparation institutions included in the NCTQ study each addressed only one of the five components of effective reading instruction (Walsh et al., 2006). A subsequent review of reading-course syllabi conducted 7 years after the NCTQ study found that 62.1% of Connecticut’s teacher training institutions still do not reference the Blueprint (McCombes-Tolis & Spear-Swerling, 2011).
Researchers provided evidence that ongoing professional development in the science of reading improves teacher knowledge of the science of reading and capacity to implement effective reading instruction (e.g., Bos, Mather, Narr, & Babur, 1999; O’Connor, 1999; Podhajski et al., 2009; Spear-Swerling, 2009). Yet, Connecticut teachers report that most schools do not conduct ongoing professional development in the science of reading (McCombes-Tolis & Feinn, 2008).

**Rural Teacher Training**

Rural teachers tend to graduate from less-selective colleges (Gibbs, 2000), are less academically prepared (Lavalley, 2018), and are less likely to pursue advanced training (Player, 2016). Rural schools experience difficulty recruiting and retaining well-trained teachers (Carter, 2003; Player, 2016), especially for positions requiring advanced training (e.g., literacy specialists; J. Johnson & Howley, 2015; Player, 2016). As a result, rural school teachers often teach subject matter that they were not trained to teach (J. Johnson & Howley, 2015). Compounding their lack of preparation, remoteness keeps rural school teachers isolated from research discussions in academic institutions, professional-development opportunities, and professional networks (Howley & Howley, 2005; Lavalley, 2018).

**Access to Reading Research**

Although researchers advocate, “to prevent reading failure, educators must understand and act on scientific evidence” (Lyon & Chhabra, 2004, p. 12), teachers lack access to reading-research evidence (Kilpatrick, 2015). Peer-reviewed journals are housed in university libraries accessible to enrolled students (Kilpatrick, 2015). Even with access, teachers lack the time and skills to search the vast body of reading research, evaluate research credibility, and process complex and jargon-riddled research studies (P. J. Stanovich & Stanovich, 2003). Outside the ivory towers of peer-reviewed journals and university libraries, journal subscriptions and individual article fees further
reduce research access. Lack of access compounds in rural settings where remoteness isolates rural teachers from research discussions (Lavalley, 2018). Absent access to reading research, teacher decisions and practice are informed not by science but by the political influence of those who “intensely pursue them,” leaving teachers vulnerable to widely promoted “educational remedies” that lack empirical proof of effectiveness (P. J. Stanovich & Stanovich, 2003, p. 4).

**Teacher Belief and Bias**

**Dunning–Kruger Bias**

Failure to implement effective reading instruction emerges from ignorance, a deficit of knowledge, and Dunning-Kruger bias: an inability to detect ignorance (Dunning, 2011; Kruger & Dunning, 1999; Schlösser, Dunning, Johnson, & Kruger, 2013). Central to Dunning–Kruger bias are “unknown unknowns” or information that lies outside of an individual’s awareness and is therefore inconceivable (Dunning, 2011, p. 252). Research provides evidence that reading teachers are unaware of what they do not know about the science of reading (Cunningham et al., 2004; Spear-Swerling et al., 2005). In Connecticut, kindergarten through third-grade teachers overestimate their knowledge of the science of reading (Spear-Swerling et al., 2005), but also report that they feel qualified and confident to teach reading (McCombes-Tolis & Feinn, 2008).

Significantly, confidence in an alternative domain-specific misbelief or an unfounded and inaccurate belief masks Dunning–Kruger bias (Dunning, 2011). Further, individuals with less accurate knowledge prove more confident in the correctness of inaccurate misbelief and act to protect misbelief and associated practices (Schlösser et al., 2013). Absent awareness of ignorance, individuals are satisfied that they are competent, lack the motivation to question competence, defend competence, and remain ignorant (Kruger & Dunning, 1999).
Deficit Thinking

Deficit thinking is pervasive in education (Dudley-Marling, 2015). The primary recurring element of deficit thinking is blaming the victim (Patton Davis & Museus, 2019). Using deficit thinking, educators blame children’s genetic predispositions and pre-school experiences in families and communities for early reading failure (Henderson, 2002). In this way, deficit thinking exonerates educators from culpability for learning failure and, thereby, responsibility for improving learning (Hambacher & Thompson, 2015).

Another primary recurring element of deficit thinking is its implicit nature (Patton Davis & Museus, 2019). Implicit biases are unconscious feelings, attitudes, and stereotypes involuntarily triggered by the characteristics of others that automatically and unconsciously influence judgments, decisions, and behaviors (Dasgupta, 2013). In their first interaction with students, educators implicitly evaluate students’ actual development against some ideal of optimal development associated with school expectations (Hambacher & Thompson, 2015). Although teachers perceive children judged to be optimally developed as amenable to instruction, they perceive children judged inadequately-developed as irreversibly and pathologically resistant to instruction (Pearl, 1991). Accepting that reading failure is attributed to pre-school factors, educators assume that risk for reading failure is fixed before school entry and, therefore, immutable to improvement in school (Henderson, 2002).

Deficit Thinking in Context

Deficit thinking is justified and perpetuated through discourse (Patton Davis & Museus, 2019) and the ways teachers share theories about reading failure (Henderson, 2002). In the rural study context, deficit thinking emerges in discourses surrounding student deficiencies in literate cultural capital, chronological age, and developmental readiness detected at school entry. In each
instance, teachers justify deficit thinking through anecdotal and correlational observations, and in each instance, empirical evidence neatly debunks deficit thinking.

**Rural-Deficit Argument: Level of Literate Cultural Capital at Kindergarten Entry**

Children bring different levels of literate cultural capital to the task of learning to read in school. Literate cultural capital is a broad term educators use to describe children’s emergent literacy skills and cognitive entry skills that together support reading development in school (Tunmer & Nicholson, 2011). Emergent literacy skills include receptive vocabulary, decontextualized language, print and book conventions, letter names and sounds, inventive spelling, phonological sensitivity, semantic and syntactic awareness, and positive dispositions toward learning and reading (Tunmer, Chapman, & Prochnow, 2006). Cognitive entry skills include existing knowledge, skills, and strategies children use to link prior learning to new learning (Prochnow, Tunmer, & Arrow, 2015, p. 146).

In alignment with deficit thinking, children who enter kindergarten with higher levels of literate cultural capital experience an earlier, more significant, and more enduring response to reading instruction (Bradley, Caldwell, Rock, & Harris, 1986; Tunmer, Chapman, Greaney, Prochnow, & Arrow, 2013). Also in alignment with deficit thinking, children who enter kindergarten with lower levels of literate cultural capital tend to measure more than 2 years behind on tests of reading achievement, beginning in kindergarten and persisting throughout elementary school (Prochnow et al., 2015). Significantly, backfilling gaps in literate cultural capital through targeted interventions is effective (Lonigan et al., 2003; Markovitz et al., 2015; Turley, Gamoran, McCarty, & Fish, 2016) and accomplished quickly (Lonigan et al., 2013; Markovitz et al., 2015). Notably, students with lower levels of literate cultural capital at school
entry benefit most from precisely individualized code-emphasis instruction and least from meaning-emphasis instruction (Connor et al., 2009; Juel & Minden-Cupp, 2000).

**Rural-Deficit Argument: Chronological Age at Kindergarten Entry**

Educators in context theorize that students’ chronological age at school entry negatively impacts the accumulation of literate cultural capital. In Connecticut, the state-mandated 5-years-old by January 1 cut-off date for kindergarten enrollment (C.G.S Sec. 19-15c, 2016) means children may enter kindergarten as young as 4.8 years old. According to the *Connecticut Office of Early Childhood Report on Changing the Kindergarten Entry Date*, on average, 24% of Connecticut’s 39,000 kindergartners begin school each year younger than 5-years-old (Connecticut Office of Early Childhood, 2014). This percentage is higher in impoverished areas where families struggle to pay for childcare and in rural areas where organized childcare is scarce. Researchers provided evidence that young chronological age at school entry does not affect reading achievement over time (Lincove & Painter, 2006; March, 2005; Suggate, 2009). Significantly, early differences in reading achievement reflect less opportunity to accumulate literate cultural capital before the onset of reading instruction and do not indicate an inability to learn to read in school (e.g., Elder & Lubotsky, 2009).

**Rural-Deficit Argument: Developmental Readiness for Reading**

Educators in context theorize that students may be chronologically eligible for kindergarten but at the same time developmentally unprepared to begin reading instruction. Ideas about developmental readiness for reading emerge from maturational theories of development (e.g., Erikson, Gesell, Piaget). Maturational theorists assume that development progresses along a continuum through a sequence of hierarchically ordered stages, development proceeds learning, capacity for development is genetically predetermined, and development is not
accelerated by learning (S. Cooke & Cooke, 1973). Developmental readiness for reading proponents advise to delay reading instruction until children are developmentally ready, which they often assert is some time after 6 years and 6 months old (e.g., Morphett & Washburne, 1931). Developmentalists argue that the provision of extra time before the onset of instruction to allow children to neurologically and physically “ripen” mitigates risk for reading failure (Flint et al., 2019, p. 165).

Reading readiness is an outmoded and empirically refuted idea. Emergent-literacy theorists counter reading-readiness assumptions with evidence that children acquire a range of reading-related knowledge and skills in pre-school settings that are direct precursors to reading skills developed in school settings (Lonigan et al., 2008; Senechal, 2007; Whitehurst & Lonigan, 1998). Importantly, researchers also established that emergent literacy skills are amenable to direct teaching (Lonigan et al., 2003, 2013; Lonigan & Shanahan, 2009).

Literacy educators who theorize child variation detected at school entry as the cause of low early reading achievement fail to critically consider that institutionalized reading-instruction structures and processes systematically exclude children from opportunities to learn to read (e.g., Patton Davis & Museus, 2019; Hambacher & Thompson, 2015; Pearl, 1997; Valencia, 2010). Researchers suggested that to understand early reading failure, it is necessary to move beyond investigating student deficits to understand the institutional deficits that underly low early reading achievement (e.g., Patton Davis & Museus, 2019; Gee, 2001; Seidenberg, 2013).

**Summary and Moving Forward**

A “two-cultures problem” and educator confusion underlies the failure of reading policy to influence the technical core of the classroom. At the center of the two-cultures problem is dissonance between truth or the science of reading, and an unfounded belief that students
implicitly discover reading without direct instruction. Controversies between the two cultures include disagreements surrounding the definition of skilled reading and how reading develops and should be taught. In reading-instruction cultures, other factors also influence the response to reading policy, including teacher knowledge, beliefs, and biases.

Several themes emerged from the Chapter 1 literature review. First, reading policy itself is insufficient to transform the technical core of the classroom. Second, an urgent need exists to increase reading achievement by the end of third grade. Third, to improve equitable access to effective reading instruction, educators must prioritize effective reading instruction and deemphasize meaning-emphasis reading instruction. Finally, a pressing need persists to shift the focus from investigating child-level deficits as the origin of early reading failure to investigate institutional obstacles as the explanation for early reading failure.

Chapter 1 explained the science of reading with reference to evidence of the essential components of effective reading instruction and three theories that explain how reading develops and should be taught, sociocultural learning theory, emergent literacy theory, and the component model of reading. Knowledge of the science of reading guides the multiphase needs assessment presented in the next chapter. The purpose of the needs assessment is twofold. First, to investigate one rural school’s response to reading policy; and second, to gain insight leading to the identification of factors outside of reading policy that constrain or enable attainment of reading-policy goals.
Chapter 2

Needs Assessment

Chapter 2 presents a multiphase needs assessment conducted to investigate three phenomena in one rural school in northwest Connecticut. Phase 1 focused on how the reading-instruction culture in context responds to federal reading policy. Phase 2 entailed investigating kindergarten teachers’ ability to recognize risk for reading failure. Phase 3 explored students’ opportunity to interact profitably with the reading instruction available in context. The needs assessment is informed by the science of reading as established in Chapter 1 including evidence of the components of effective reading instruction and how reading develops and should be taught.

Theoretical Perspective

Knowledge of the science of reading guided the multiphase needs assessment. Chapter 1 outlined the science of reading with reference to evidence of the essential components of effective reading instruction (Foorman et al., 2016; NRP, 2000) and three theories that explain how reading develops and should be taught, sociocultural learning theory (McCarthy, 1929; Vygotsky, 1980), emergent literacy theory (Senechal, 2007), and the component model of reading theory (Aaron et al., 2008).

Context

Study participants were drawn from two kindergarten classrooms in a rural primary school in northwest Connecticut. To protect the anonymity of the school community, the pseudonym NWPS was assigned.
Participants

Students

Participants included 40 kindergarten students: 21 boys and 19 girls. Before kindergarten, 19 students attended preschool. All students were attending kindergarten for the first time and entered school between 4.8 and 5.11 years old. In this population, 33 students were White, five were Black, and two were Asian/Pacific Islander. Two students spoke a home language other than English. Three students qualified for free or reduced-price lunch, and the same three students participated in a school-choice program and were bussed to NWPS from an urban center.

Teachers

Participants also included two state-certified kindergarten teachers. The first teacher earned a bachelor’s degree in Clinical/Counseling Psychology and Elementary Education from an out-of-state university and a master’s degree in Language Arts from a Connecticut university. At the time of the needs assessment, the first teacher taught kindergarten at NWPS for 5 consecutive years. The second teacher earned a bachelor’s degree in English Literature and a master’s degree in General Education from Connecticut universities. At the time of the needs assessment, the second teacher taught kindergarten at NWPS for 7 consecutive years.

Statement of Purpose and Objectives

The purpose of the multiphase needs assessment was twofold. First, to investigate how the reading-instruction culture in one rural school responded to reading-policy guidelines. Second, to gain insight leading to the identification of factors outside of reading policy that constrained or enabled attainment of reading-policy goals. Study objectives included the following:
• To investigate the degree of alignment between reading instruction at NWPS and the principles of scientifically-based reading instruction articulated by the NRP report (2000) and evidence-based curriculum articulated by the International Reading Association (2004).

• To investigate the accuracy of kindergarten teachers’ perceptions of students who are at-risk for early reading failure.

• To investigate how kindergarten teachers teach reading and modify instruction to respond to students who struggle to learn to read.

Research Questions

The following research questions guided the multiphase needs-assessment study.

RQ1: What is the degree of alignment between reading instruction implemented at NWPS and policy guidelines to teach reading using scientifically-based reading instruction and evidence-based reading curriculums?

RQ2: How do teachers’ perceptions of students’ risk for reading failure compare to students’ actual risk for reading failure?

RQ3: How do kindergarten teachers teach reading and adapt instruction to respond to the needs of kindergarten students who struggle to learn to read?

Research Design

The needs-assessment study was conducted in three distinct phases in a single setting. In the first phase, a quantitative research question guided a study to determine the degree of alignment between the kindergarten reading curriculum implemented in context and policy guidelines to teach reading using scientifically-based reading instruction and evidence-based reading curriculums. In the second phase, a quantitative research question guided a study to
compare teachers’ perceptions of students’ risk for reading failure to students’ actual risk for reading failure. Finally, in the third phase, a qualitative research question guided an observational study to describe how kindergarten teachers teach reading and adapt reading instruction to respond to the needs of kindergarten students who struggle to learn to read.

**Phase 1 Methods**

In Phase 1 of the needs assessment, a document analysis guided by a rating scale was conducted to review the reading curriculum implemented at NWPS. Document analysis is a "systematic procedure for reviewing or evaluating documents—both printed and electronic" (Bowen, 2009, p. 27). A curriculum is the “teaching materials such as those that can be found in commercial textbooks and software applications” (Whitehurst, 2009, p. 1). Documents reviewed include the core kindergarten reading curriculum at NWPS, *Teachers College Reading and Writing Project: Units of Study for Teaching Reading: Grade K* (hereafter, *Units of Study*; Calkins et al., 2015). The rating scale, *The Florida Center for Reading Research Reading Curriculum Alignment Scale* (Al Otaiba, Kosanovich-Grek, Torgesen, Hassler, & Wahl, 2005), guided the document analysis to answer Research Question 1.

**RQ1:** What is the degree of alignment between reading instruction implemented at NWPS and policy guidelines to teach reading using scientifically-based reading instruction and evidence-based reading curriculums?

**Construct Definitions**

Three constructs are defined: scientifically-based reading instruction, evidence-based curriculums, and the five essential components of reading instruction.
Evidence-Based Reading Curriculum

A curriculum is evidence-based when a peer-reviewed randomized control study, a quasieperimental study, or a correlational study provides evidence that the curriculum has a statistically significant effect on improving student outcomes (ESSA, 2015; International Reading Association, 2004)

Scientifically-Based Reading Instruction

Scientifically-based reading instruction includes the five essential components of reading instruction identified by the NRP Report (2000): phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Scientifically-based reading instruction is most effective when structured and delivered explicitly, systematically, and with varying degrees of frequency, duration, and intensity in response to individual child variation (Foorman & Torgesen, 2001; Spear-Swerling, 2018). Table 1 provides FCRR definitions of the five essential components of reading instruction.

Table 1

<table>
<thead>
<tr>
<th>Essential component</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Phonemic awareness</td>
<td>The oral language skill that involves the ability to identify and manipulate individual sounds in words</td>
</tr>
<tr>
<td>Phonics</td>
<td>An understanding of the alphabetic principal that is the relationship between phonemes, or individual sounds and letters</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>The knowledge of the meanings and pronunciations of words that are used in both oral and written language</td>
</tr>
<tr>
<td>Fluency</td>
<td>The ability to process text accurately, quickly, and efficiently</td>
</tr>
<tr>
<td>Comprehension</td>
<td>The ability to make sense of text and to monitor for understanding</td>
</tr>
</tbody>
</table>

Note. Adapted with permission (see Appendix A) from Reviewing core kindergarten and first-grade reading programs in light of No Child Left Behind: An exploratory study, by S. Al Otaiba, M. L. Kosanovich-Grek, J. K. Torgesen, L. Hassler, & M. Wahl, 2005, Reading & Writing Quarterly, 21(4), p. 379. https://doi.org/10.1080/10573560591002286
Instrument

A rating scale, the Florida Center for Reading Research Reading Curriculum Alignment Scale (FCRR; Al Otaiba et al., 2005), was used to evaluate the degree of alignment between the kindergarten reading curriculum implemented at NWPS and reading-policy guidelines. A numbered coding system (1 = very well aligned, 2 = acceptably aligned, and 3 = not aligned) was used to indicate if components of scientifically-based reading instruction are “present and prominent and whether the quality of the instructional design of each of the five components was acceptable based on the Florida Center for Reading Research Guidance Document and the findings of the NRP” (Al Otaiba et al., 2005, p. 388). A copy of the Florida Center for Reading Research Guidance Document appears Appendix B.

Reliability and Validity

A five-member panel of FCRR senior researchers reviewed the FCRR Scale and noted evidence of good face and content validity (Al Otaiba et al., 2005). A second three-member panel of FCRR researchers used the scale to review six K–1 reading curriculums and reported 100% reliability (Al Otaiba et al., 2005). Between 2002 and 2008, FCRR researchers used the FCRR Scale extensively to assist Florida Reading First Schools to select evidence-based reading curriculums. A series of FCRR reports provided findings previously available on the FCRR website. The FCRR reports served as the developmental studies for the Rubric for Evaluating Reading/Language Arts Instructional Materials for Kindergarten to Grade 5 (Foorman, Smith, & Kosanovich, 2017) used later in the dissertation research study.

The FCRR Scale was used to review the kindergarten reading curriculum implemented at NWPS, Units of Study (Calkins et al., 2015). The FCRR Scale was completed through an extensive review of all curriculum components contained in the Units of Study (kindergarten
curriculum kit) including four units of study, *A Guide to the Reading Workshop, Primary and Intermediate Grades* (teacher’s guide), *If ... Then ... Curriculum* (additional units of study and guidance for differentiation), and online resources available through the curriculum’s companion website.

**Data Collection and Storage**

Data was collected using the electronic version of the FCRR Scale and was stored on a password-protected laptop computer.

**Data Analysis**

Results were analyzed using the FCRR Scale’s numbered coding system (*1 = very well aligned, 2 = acceptably aligned, and 3 = not aligned*) to indicate the degree of coherence between the kindergarten reading curriculum and reading-guidelines policy to teach reading using scientifically-based reading instruction and an evidence-based reading curriculum.

**Findings**

The first phase of the needs assessment was designed to answer the first quantitative research question.

RQ2: What is the degree of alignment between the kindergarten reading curriculum implemented at NWPS and policy guidelines to teach reading using scientifically-based reading instruction and an evidence-based reading curriculum?

The curriculum reviewed, *Units of Study*, did not explicitly address any of the five essential components of scientifically-based reading instruction including phonological awareness, phonics, vocabulary, fluency, and comprehension. Using the FCRR Scale and guidance document, each component earned a score of 3, not aligned. The completed FCRR Scale appears in Table 2.
Table 2

The Florida Center for Reading Research Reading Curriculum Alignment Scale

<table>
<thead>
<tr>
<th>Content area</th>
<th>Presence</th>
<th>Quality</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonological awareness</td>
<td>Absent</td>
<td>Not Acceptable</td>
<td>Phonological instruction is absent</td>
</tr>
<tr>
<td>Phonics</td>
<td>Absent</td>
<td>Not Acceptable</td>
<td>Phonics instruction is absent</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Absent</td>
<td>Not Acceptable</td>
<td>Vocabulary instruction was limited to sight word instruction</td>
</tr>
<tr>
<td>Fluency</td>
<td>Absent</td>
<td>Not Acceptable</td>
<td>Fluency strategies are not explicitly taught.</td>
</tr>
<tr>
<td>Comprehension strategies</td>
<td>Absent</td>
<td>Not Acceptable</td>
<td>Comprehension strategies are not explicitly taught.</td>
</tr>
</tbody>
</table>


Limitations

The first phase of the needs assessment was subject to single-investigator bias. Researchers mitigate single-investigator bias through triangulation of data from multiple sources to deliver a “confluence of data that breeds credibility” (Eisner, 1991, p. 110). In this case, two sources of data were analyzed to investigate the degree of alignment between reading policy guidelines and reading instruction at NWPS, the Phase 1 document review outlined in this section, and the Phase 3 observations discussed in a subsequent section. To check bias, I intermittently discussed my process and findings with a high-end user of the Units of Study, the NWPS literacy consultant.

Discussion

Phase 1 findings included that kindergarten reading instruction at NWPS is incoherent with reading-policy guidelines. Results suggested that at NWPS, the response to external reading-policy pressure includes individual and collective resistance to protect existing reading instruction practices.
Phase 2 Methods

In Phase 2 of the needs assessment, a quantitative research question guided a study to investigate how teachers’ perceptions of students’ risk for reading failure compared to students’ actual risk for reading failure. Two types of data were collected: secondary source data regarding students’ actual risk for reading failure, and primary source data from a teacher-completed rating scale indicating teacher perceptions of student risk for reading failure. The two types of data were compared to answer the Phase 2 research question.

RQ2: How do teachers’ perceptions of students’ risk for reading failure compare to students’ actual risk for reading failure?

Construct Definitions

At Risk for Reading Failure

Kindergarten students identified as at risk for reading failure are students whose level of literate cultural capital\(^9\) developed in pre-school environments limits their ability to interact profitably with the reading instruction encountered in school environments (Tunmer et al., 2006).

Teacher Perception of Risk for Reading Failure

Teacher perception of students at risk for reading failure is a teacher’s ability to identify students who may need supplemental reading support to become literate (Bleses, Vach, Jørgensen, & Worm, 2010).

\(^9\) Literate cultural capital is a broad term used to describe children’s emergent literacy skills and cognitive entry skills that together support reading development in school (Tunmer & Nicholson, 2011 as cited by Prochnow, Tunmer, & Arrow, 2015, p. 145). Cognitive entry skills include existing knowledge, skills, and the strategies children use to link prior learning to new learning (Prochonw et al., 2015, p. 146).
Instruments

Data for Phase 2 of the needs assessment came from three sources. Secondary data was drawn from a tool routinely used at NWPS to monitor student risk for reading failure, the Dynamic Indicators for Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2004). Secondary data was also drawn from the Connecticut Longitudinal Study, which provides evidence of the percentage of students in Connecticut who are actually at risk for reading failure. Primary data accrued through a teacher-completed rating scale, the Shaywitz DyslexiaScreen (SDS; S. E. Shaywitz & Pearson, 2016).

Dynamic Indicators of Basic Early Literacy Skills

The kindergarten version of the DIBELS (Good & Kaminski, 2004) collects data three times a year: at the beginning, middle, and end of kindergarten. This study drew data from the beginning of kindergarten Upper Case Letter Naming Fluency (LNF), Lower Case LNF, and Letter Sound Fluency subtests.

The DIBELS Upper and Lower Case LNF test is an individually administered standardized test based on the research of Marston and Magnusson (1988) that measures risk for reading failure. Educators administer the LNF during all three testing periods in kindergarten and again in the fall of first-grade. Teachers give students a page of upper and lower case letters arranged in random order and direct students to name as many letters as they can in 1 minute. Students who score in the bottom 20% are considered at risk for reading failure, and students who score between 20% and 40% are considered somewhat at risk for reading failure (Good & Kaminski, 2002). A sample of the LNF appears in Appendix C.

The DIBELS Initial Sound Fluency (ISF) test is an individually administered standardized test based on the research of Kaminski and Good (1998) and Laimon (1994) that
measures children’s ability to isolate and reproduce initial sounds in orally presented words. Educators administer the ISF during all three testing periods in preschool and again at the beginning and middle of kindergarten. Teachers first present students an array of four pictures and direct them to identify the picture that begins with an orally presented sound. Teachers then ask students to isolate and produce the initial sound of an orally presented word. The benchmark goal is fluency with 23 or more initial sounds in the fall of kindergarten. Children with scores below 12 in the fall of kindergarten are considered at risk for reading failure. A sample of the ISF appears in Appendix D.

**Reliability and Validity**

The DIBELS manual reports evidence of moderate levels of reliability ($r = .72$ to $.89$) across single administrations of the subtests of LNF and ISF at the kindergarten level (Good, Kaminski, Cummings, & Dufour-Martel, 2011). Likewise, the DIBELS manual reports evidence of moderate levels of validity ($r = .36$ to $.75$) across single administrations of the individual subtests of LNF and ISF at the kindergarten level (Good et al., 2011).

**The Connecticut Longitudinal Study**

The Connecticut Longitudinal Study continues to follow 80% of a sample of 445 individuals who entered kindergarten in Connecticut in 1983 (S. E. Shaywitz et al., 1999). A primary finding emerging from the Connecticut Longitudinal Study relevant to the needs assessment is the prevalence of students at risk for reading failure ranges from 17 to 20% of the general population (S. E. Shaywitz, 1998; S. E. Shaywitz & Pearson, 2016). Significantly, SDS items were developed and normed as part of the Connecticut Longitudinal Study (S. E. Shaywitz & Pearson, 2016).
The Shaywitz DyslexiaScreen

The SDS (S. E. Shaywitz & Pearson, 2016) is an electronic teacher-completed rating scale. Researchers use the SDS to collect data related to teachers’ perceptions of students’ phonological, linguistic, and academic achievement. The SDS is nationally and regionally normed. Two large-scale national validity studies conducted by Pearson Publishing revealed evidence of excellent levels of reliability and good levels of validity (S. E. Shaywitz & Pearson, 2016). To complete the scale, teachers rate each of 10 items using a 5- or 6-point scale. Teachers indicate their perceptions retrospectively and without the assistance of student-achievement data. Results are reported as at risk or not at risk for dyslexia. A sample of the SDS appears in Appendix E.

Procedure

Participant Recruitment

On March 8, 2017, three formal gatekeepers—the district superintendent, the district director of special services, and the NWPS principal—granted permission to invite five NWPS kindergarten teachers to complete the SDS form. On April 3, 2017, e-mails went to five NWPS kindergarten teachers, inviting them to volunteer to complete the SDS. Two of five kindergarten teachers volunteered and signed letters of consent. The two teachers completed the electronic SDS for 40 students between April 24 and April 27, 2017. An example of the letter of consent appears in Appendix F.

Data Collection and Storage

Secondary data accrued using the DIBELS (Good Kaminski, 2004). Before the needs assessment, NWPS paraeducators collected DIBELS data using test-specific data-collection tools. A NWPS administrative assistant aggregated data using an electronic data-management
system. On March 8, 2017, the superintendent of schools and the NWPS principal granted access to DIBELS data. The principal and an administrative assistant entered data into a password-protected spreadsheet that was e-mailed to me on April 7, 2017. The SDS collects data electronically using a web-based data-collection and -management tool. Administrator access to the SDS online data-management tool gave me full access to the password-protected data stored on the tool.

**Data Analysis**

Descriptive statistical procedures were used to analyze DIBELS results and results were presented as percentages. The SDS and the CLS outcomes are also presented as percentages. The DIBELS results (students’ actual risk for reading failure) were compared to SDS and CLS results (teachers’ perception of students at-risk for reading failure).

**Results**

**DIBELS Results**

On the upper case LNF subtest, kindergarten students named, on average, 21.7 ($s = 5.72$) uppercase letters with a range of 4–26, and 30% of students failed to meet the cutoff score and qualified as at risk of failing to learn to read. On the lower case LNF subtest, kindergarten students ($n = 40$) named, on average, 19 ($s = 6.52$) lower case letters with a range of 3–26, and 15% of the students failed to meet the cutoff score and qualified as at risk of failing to learn to read. On the LSF subtest, kindergarten students ($n = 40$) provided, on average, 12.8 ($s = 7.15$) letter sounds with a range of 1–24, and 22.5% of the students failed to meet the cutoff score and qualified as at risk of failing to learn to read. Table 3 and Figures 2–4 present statistics for the DIBELS subtests.
Table 3

Descriptive Statistics for the DIBELS Letter Sound Fluency and Letter Naming Fluency

<table>
<thead>
<tr>
<th>Fall measures</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper case letter naming fluency</td>
<td>21.7</td>
<td>5.7</td>
<td>40</td>
</tr>
<tr>
<td>Lower case letter naming fluency</td>
<td>19.0</td>
<td>6.5</td>
<td>40</td>
</tr>
<tr>
<td>Letter sound fluency</td>
<td>12.8</td>
<td>7.1</td>
<td>40</td>
</tr>
</tbody>
</table>

*Figure 2.* Descriptive statistics for the Dynamic Indicators for Basic Early Literacy Skills Upper Case Letter Naming Fluency.

*Figure 3.* Descriptive statistics for the Dynamic Indicators for Basic Early Literacy Skills Lower Case Letter Naming Fluency (September).
Figure 4. Descriptive statistics for the Dynamic Indicators for Basic Early Literacy Skills Letter sound Fluency.

The Shaywitz DyslexiaScreen

Results from the SDS revealed that NWPS kindergarten teachers perceived 12 of 40 or 30% of kindergarten students as at risk of reading failure. Kindergarten teachers’ perceptions of kindergarten students’ risk for reading failure appear in Table 4.

Table 4

Descriptive Statistics for the Shaywitz Dyslexia Screen

<table>
<thead>
<tr>
<th>N</th>
<th>Not at risk</th>
<th>At risk</th>
<th>Percent at risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>28</td>
<td>12</td>
<td>30%</td>
</tr>
</tbody>
</table>

Findings

The second phase of the needs assessment was designed to answer the second quantitative research question.

RQ2: How do teachers’ perceptions of students’ risk for reading failure compare to students’ actual risk for reading failure?
Teachers’ perceptions of kindergarten students’ risk for reading failure were compared to students’ actual risk for reading failure to investigate the accuracy of NWPS teacher perceptions of students’ risk for reading failure. Results from the comparison of SDS to DIBELS and the CLS indicated that NWPS kindergarten teacher overestimate risk for reading failure. DIBELS outcomes indicated that 22.5% of NWPS kindergarten students are actually at risk for reading failure. Likewise, the CLS provides evidence that 17–20% of the general population of Connecticut school children are actually at risk for reading failure. However, according to the SDS, NWPS kindergarten teachers perceived that 30% of kindergarten students are at risk for reading failure. Table 5 provides a comparison of students’ actual risk for reading failure with teachers’ perceptions of reading failure.

Table 5

| Students’ Actual Risk for Reading Failure Compared to Teacher Perception of Reading Failure. |
|-----------------------------------------------|----------------|----------------|
| SDS-indication of teacher perception of students at-risk | Not at-risk | 28 | At-risk | 12 | Percent at-risk | 30% |
| Connecticut Longitudinal Study indication of students at-risk | 32–33.2 | 6.8–8 | 17–20% |
| DIBELS LNF and LSF indication of students at-risk | 28–34 | 6–12 | 22.5% |

Note. SDS = Shaywitz DyslexiaScreen, DIBELS = Dynamic Indicators for Basic Early Literacy Skills.

Limitations

The Hawthorne effect potentially threatened the validity of Phase 2 of the needs assessment. To explain, during the 7 months leading up to Phase 2 of the needs assessment, I conducted ongoing participant observations in kindergarten classrooms at NWPS. Consequently, kindergarten teachers may have shaped their responses on the SDS to indicate what they perceived to be my expectations. Additionally, the study size of two respondents is small and inadequate for a complex statistical analysis. Finally, the comparability of secondary-source data
regarding students’ actual risk for reading failure with primary-source data from a teacher-completed rating scale may be questioned. Specifically, the student populations involved in norming the SDS are different from the student population at NWPS.

**Discussion**

Results, that kindergarten teachers overestimate risk for reading failure, suggests that at NWPS, kindergarten teachers are confused about how reading develops. This suggestion converges with research evidence that many Connecticut kindergarten teachers are confused about how reading develops (e.g. McCombes-Tolis & Feinn, 2008).

**Phase 3 Methods**

In Phase 3 of the needs-assessment study, a qualitative research question guided an observational study of reading instruction.

RQ3: How do kindergarten teachers teach reading and adapt instruction to respond to the needs of kindergarten students who struggle to learn to read?

**Construct Definition**

Scientifically-based reading instruction includes the five essential components of reading, phonemic awareness, phonics, fluency, vocabulary, and text comprehension (NRP, 2000). Scientifically-based reading instruction is most effective when structured and delivered explicitly, systematically, and with varying degrees of frequency, duration, and intensity related to individual child variation (Foorman & Torgesen, 2001; Spear-Swerling, 2018). Table 1 provides definitions of the five essential components of reading.
Instrument

Observation Form and Analysis Code

Observations were conducted using a prepared observation form and a predetermined analysis code to record the incidence, duration, and quality of a limited number of precisely defined behaviors. The observation form and predetermined code appear in Appendix G.

Reliability

According to Michaels (1983), reliability of observational studies increases when the number of behaviors investigated is limited and when those behaviors are precisely operationalized to limit the number of inferences required in the analysis (Gellert, 1955, as cited in Michaels, 1983). Michael’s (1983) guidelines increased the reliability of a prepared observation form to record the incidence, duration, and quality of the whole-group, small-group, and one-to-one instruction of the five essential components of scientifically-based reading instruction.

Procedure

Two observations of kindergarten reading instruction were conducted using a nonparticipant approach without involvement in classroom processes. The rationale for a nonparticipant approach is that if the observer is uninvolved with classroom processes, the observer can concentrate on all aspects of the behaviors being observed (Zohrabi, 2013).

Participant Recruitment

On August 17, 2016, two formal gatekeepers—the district superintendent and the NWPS principal—granted permission to conduct observations of reading instruction in five kindergarten classrooms at NWPS. In response to an e-mail request, four of five kindergarten teachers consented to ongoing participant observations 2 days per week for the school year 2016–2017,
and two of five kindergarten teachers granted additional permission for periodic nonparticipant observations of reading instruction.

Data Collection and Storage

Observation data was recorded using a paper observation form. Once analyzed, observation forms were electronically scanned and stored on a password-protected laptop computer and the original paper observation forms were destroyed.

Data Analysis

Observation forms were analyzed using a predetermined code. Codes indicated the incidence, duration, and quality of the whole-group, small-group, and individual instruction of the five essential components of scientifically-based reading instruction.

Findings

Phase 3 of the needs assessment was designed to answer a qualitative research question.

RQ3: How do kindergarten teachers teach reading and adapt instruction to respond to the needs of kindergarten students who struggle to learn to read?

Findings from nonparticipant observations were consistent with findings from ongoing participant observations. Whole-group, small-group, and one-on-one instruction using the five components of scientifically-based reading instruction were absent. Instead, teachers used a meaning-emphasis approach to teach reading and to respond to a student who struggled to learn to read. The next section provides an illustrative example.

How Does the Teacher Teach Reading?

Participants in the reading lesson included one kindergarten teacher and 19 kindergarten students. A literacy paraprofessional was also present and managed student off-task behavior, but
did not otherwise participate. The lesson began with students seated near assigned partners on a carpet surrounding the teacher.

Throughout the reading lesson, the teacher precisely followed the reading-workshop format prescribed by the core reading curriculum used at NWPS, the *Units of Study*. As prescribed, the teacher began the reading workshop with a 10-minute whole-group *minilesson*. During the minilesson, the teacher introduced a new book genre, alphabet books. As the minilesson progressed, the teacher directed, modeled, and guided students to use a three-cue method to recognize known words and to guess unknown words. The teacher stressed that students should skip unknown words and then guess what skipped words might be, using context cues drawn from illustrations, syntax, semantics, and, as a last resort, the beginning letter sound. Before dismissing students to read alphabet books with partners, the teacher reemphasized, “there may be words and sentences you don’t know. Look for context clues in the pictures to help you guess the words.”

As prescribed, the reading workshop continued with 45 minutes of independent and partner reading. Also as prescribed, the teacher interrupted students once with a midworkshop *teaching moment* to remind students of the concepts covered in the minilesson. During the teaching moment, the teacher repeatedly restated “there may be words and sentences you don’t know. Look for context clues in the pictures to help you guess the words.” Throughout, the teacher conferred responsively and spontaneously with small groups, dyads, and one-on-one primarily to redirect off-task behavior. The teacher repeatedly stated, “if you need help figuring out a word, ask your partner.”

**How Does the Teacher Respond to Students Who Struggle to Read?**

Later, a student struggling to read a word approached the teacher with an alphabet book and pointing to the word asked, “What does this say?” The teacher responded by supporting the
struggling student to guess what the unknown word might be, using the illustration and semantic cues. The child was unable to recognize the word using the cues. The teacher eventually redirected the struggling student to return to their partner and ask them to help guess the word. Minutes later, the same struggling student approached the teacher again and pointing to the same word repeated, “What does this say?”

The teacher repeated the same three cue strategies with the same level of intensity as before, and again redirected the struggling and now visibly frustrated student to return to their partner and ask them to help guess the word. A short time later, the struggling student’s partner approached the teacher with their partner’s book and asked for assistance to read the same word. Instead of responding to the student’s question, the teacher ended the lesson, stating, “I think they need a break.” During the transition, the teacher whispered explanations for the struggling student’s failure: “both parents work and they don’t read with her” and “she is often tired because she leaves here to go to daycare, and then they keep her up late so they can spend time with her” and “she is one of the youngest students in the class.”

**Limitations**

The third-phase observational study was subject to observer error and reactive effects. Observer error occurs when observer expectations influence data collection and analysis. To diminish observer error, a prepared observation form and predetermined codes were used to analyze a limited number of precisely operationalized behaviors. Reactive effects arise when the presence of the observer changes the behavior of the individual observed. Reactivity may “decrease significantly after the researcher has been observing for a while” (B. Johnson & Turner, 2003, p. 312). In this case, reactive effects were likely reduced because the
nonparticipant observation followed 4 months of twice-weekly participant observations during which the teacher likely grew accustomed to the observer’s presence.

**Insights**

Needs assessment findings reflected the conceptual framework; dissonance is expected. Dissonance is a “lack of agreement between the truth and what people want to believe” (Dissonance, 2020, Sense 1a). At NWPS, dissonance emerged between a truth—the science of reading, or evidence of the components of effective reading instruction and how reading develops and should be taught—and a prevailing yet unfounded meaning-emphasis belief that young children learn to read spontaneously through implicit exposure in literate environments.

**Next Steps**

A phenomenon warranting further study emerged from an integration of the themes emerging from the Chapter 1 literature review and the needs assessment results. Most often, instructional cultures are dynamic systems that fight to conserve stability (Cuban, 2013). Policy coherence is stymied when instructional cultures adopt pieces of policy that concurrently maintain stability and ensure legitimacy while rejecting those pieces of policy that threaten stability and legitimacy (e.g., Meyer & Scott, 1983). This occurrence highlights a phenomenon for further study: the hidden social mechanisms between the structural input of reading policy and the cultural output of various degrees of policy coherence.

The conceptual framework, dissonance, is expected, proved useful to describe the conditions in a reading instruction culture. The conceptual framework proves insufficient, however, to guide a research study aimed at explaining varying degrees of coherence between policy and practice. The next chapter presents the integrated theoretical framework that guided the dissertation research study.
Chapter 3

The Theoretical Framework

Chapter 3 introduces the integrated theoretical framework that guides the research study, the institutional logics perspective (Thornton et al., 2012) embedded with institutional work (Lawrence & Suddaby, 2006) and organizational sensemaking perspectives (Maitlis & Christianson, 2014). This chapter begins with a review the problem of practice and the research purpose. Then, the rationale for developing the integrated framework is presented. The chapter continues with a description of each element of the integrated theoretical framework. Then, the specific approach to analysis, tracing microfoundations of institutional logics across multiple systems levels is detailed. Next, the factors and processes underlying institutional persistence and transformation, as set forth by seminal theorists are outlined. Finally, Chapter 3 presents the gaps in institutional-logics research that warranted the research study.

Review of the Problem of Practice

Education policy itself proves insufficient to influence the technical core of the classroom (i.e., curriculum and instruction; Cuban, 2013; Elmore, 1996, 2008; Mehta, 2015; Shen et al., 2017; Shen & Ma, 2006), and reading policy proves no exception (Coburn, 2001; Coburn et al., 2011). Reading policies mandate the use of scientifically-based reading instruction10 (NCLB, 2001; REA, 1998) and evidence-based reading curriculums11 (ESSA, 2015). Yet, a recent

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10 Scientifically-based reading instruction includes the five essential components of reading instruction identified by the National Reading Panel Report (2000), phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Scientifically-based reading instruction is most effective when structured and delivered explicitly, systematically, and with varying degrees of frequency, duration, and intensity in response to individual child variation (Foorman & Torgesen, 2001; Spear-Swerling, 2018).

11 A curriculum is evidence-based when a peer-reviewed randomized control study, a quasi-experimental study, or a correlational study provides evidence that the curriculum has a statistically significant effect on improving student outcomes (International Reading Association, 2004; ESSA, 2015)
nationally representative survey revealed that 75% of kindergarten through second-grade teachers use reading-instruction methods that lack research foundations and evidence of effectiveness\textsuperscript{12} (Loewus, 2019). Likewise, an accompanying groundbreaking analysis revealed that the most commonly implemented reading curriculums also lack research foundations and evidence of effectiveness \textsuperscript{13} (Schwartz, 2019).

Examining the problem of practice from an institutional perspective suggests that individuals embedded in reading-instruction cultures resist reading policy to protect highly institutionalized reading-instruction practices. Highly institutionalized instruction practices “are easily transmitted to newcomers, are maintained over long periods of time without further justification or elaboration, and are highly resistant to change” (Zucker, 1987, p. 446). In instructional cultures with highly institutionalized instruction practices, educators systematically ignore or reject other approaches to instruction, including more technically efficient approaches with better outcomes (Shulman & Mosak, 1998; Zucker, 1987).

**Research Purpose**

This research study was designed to explain how hidden social mechanisms shape various degrees of reading-policy coherence. From a perspective outside of reading-instruction cultures, policy coherence indicates that local instruction practices appear to align with external

\textsuperscript{12} Loewus (2019) reported that 75% of kindergarten through second-grade teachers report that they use a three-cueing method to teach students to guess what unknown words might be.

\textsuperscript{13} The most frequently implemented reading curriculums lack an empirical foundation and evidence of effectiveness and include:

- Calkins, L., & Teachers College Reading and Writing Project (Columbia University) (2015). *Units of study for teaching reading: Grade K*.
policy goals (Alonso, 2017). Inside reading-instruction cultures, policy coherence is achieved if the cognition and action of all individuals and groups at all systems levels align with policy goals (Honig & Hatch, 2004). Policy coherence is dynamic and continually “crafted” during ongoing processes whereby district and school leaders and educators mediate between externally imposed policy pressures and locally institutionalized reading-instruction practices (Honig & Hatch, 2004, p. 26).

**Rationale**

The rationale for integrating the three perspectives emerges from observations that institutional-logics research is subject to top-down bias with a singular focus on the influence of macrolevel processes (Cloutier & Langley, 2003; Hallett, 2010). To mitigate top-down bias, researchers are directed to “borrow, translate, and realign theories, methodologies, and ontologies from other research domains” (Zilber, 2016, p. 147). Accordingly, the integrated theoretical framework embeds the institutional-logics perspective with two additional perspectives: organizational sensemaking to explain microlevel processes (Maitlis & Christianson, 2014) and institutional work to explain the recursive interaction between macro- and microlevel processes (Lawrence & Suddaby, 2006).

**Theory Significance**

This dissertation goes beyond identifying input and output associations to provide mechanism-based explanations for the existence of a phenomenon. Mechanisms are the hidden processes between input and output variables or the “constellation of entities and activities that are linked to one another in such a way that they regularly bring about a particular type of outcome” (Hedstrom, 2005, p. 11). G. Hernes (1998) provided a helpful illustration
If a regression tells us the relation between two variables, for instance, if you wind a watch it will keep running, mechanisms pry the back off the watch and show how. Mechanisms describe “a set of interacting parts, an assembly of elements producing an effect not inherent in any one of them.” A mechanism is not so much about “nuts and bolts” as about “cogs and wheels” … the wheelwork or agency by which an effect is produced. (p. 74)

Institutional logics provides a guiding theory and a method of analysis to uncover and explain the social mechanisms hidden in reading-instruction cultures between the structural input of reading policy and the cultural output of reading-policy coherence. The next section describes the theory and later sections discuss the method of analysis, the microfoundational model of institutional logics.

**Institutional Logics**

Institutional logics are the “socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton & Ocasio, 2008, p. 101). Institutional logics act as frames of reference that shape agent cognition (e.g., organizational sensemaking) and mobilize agent action (e.g., institutional work; Thornton, Ocasio, & Lounsbury, 2015). Institutional-logics theorists assume that just as institutional logics shape agent cognition and action, agent cognition and action shapes institutional logics (Thornton, 2004) and institutional structures (Lawrence & Suddaby, 2006). Theoretical principles include the duality of agency and structure, integration of the material and the symbolic, historical contingency of institutions, and following institutions across diverse social levels (Zilber, 2013, p. 80).

**The Duality of Agency and Structure**

The duality of agency and structure refers to the assumption that institutional structures simultaneously constrain and enable agency (Giddens, 1984). Agency “refers to an actor’s ability to have some effect on the social world” by “altering rules, social ties, or distribution of
resources” (Scott, 2008, p. 93). Structures are “composed of rules, resources, and practices that are both the product of and platform in the enactment and reproduction of social life” (Giddens, 1984, as cited in Thornton et al., 2015, p. 7). In this study, the structure of interest is federal reading policy, and embedded agents include district leaders, primary school principals, designated literacy leaders\textsuperscript{14}, and kindergarten and first-grade teachers.

**Institutions as Material and Symbolic**

The institutional-logics perspective conceptualizes society as composed of three overlapping and interacting levels: society, organizations, and individuals (Friedland & Alford, 1991). Each level has unique symbolic and material properties (Thornton et al., 2015). Symbolic properties include ideas, understandings, and interpretations (Zilber, 2008). Material properties include structures and practices (Zilber, 2008). In this study, the level of society is policy, the organizational level is the reading-instruction culture, and individuals are agents embedded in reading-instruction cultures including superintendents, principals, literacy leaders, and teachers.

**Institutions as Historically Contingent**

Institutional logics are historically contingent. Structural inputs change over time, and, as a result, institutional logics also change over time (Thornton & Ocasio, 1999). This study considers the historical frame between the enactment of NCLB and the present.

**Institutions at Multiple Levels of Analysis**

The institutional-logics perspective assumes actors are progressively nested in individual, organizational, field, and societal levels (Alford & Friedland, 1985; Friedland & Alford, 1991).

\textsuperscript{14} Rural schools experience difficulty recruiting and retaining well-trained teachers (Carter, 2003; Player, 2016), especially for positions requiring advanced training (e.g., literacy specialists; J. Johnson & Howley, 2015; Player, 2016). As a result, rural school teachers often teach subject matter that they were not trained to teach (J. Johnson & Howley, 2015). This is the case in context, and literacy leaders may focus on reading but are not credentialed literacy specialists.
Idiosyncratic and dynamic structures, norms, symbols, and logics that influence agent cognition and action characterize the various levels (Alford & Friedland, 1985). This study has multiple levels of analysis and considered cross-level interaction effects experienced by individuals progressively nested in classrooms, schools, school reading-instruction cultures, districts, and external policy environments. Cross-level interaction effects incite complexity.

**Complexity**

Complexity arises as different societal sectors with differing logics overlap (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011). Complexity is the interaction of “incompatible prescriptions from multiple institutional logics” (Greenwood et al., 2011, p. 317). In this dissertation study, complexity emerges from an interpenetration of logics. An interpenetration of logics occurs when a more powerful interinstitutional sector, in this case, federal reading policy, interjects its logic into a less powerful interinstitutional sector, in this case, the technical core of the classroom, to colonize or establish political control over the less powerful interinstitutional sector (Mehta, 2015). Under conditions of complexity resulting from an interpenetration of logics, the cognition (sensemaking) of agents embedded in the less powerful interinstitutional sector range from “passive conformity to active resistance” (Oliver, 1991, p. 146). Action responses include efforts (work) to maintain or transform institutional logics and arrangements (Lawrence & Suddaby, 2006).

A contextualized Coleman (1990) diagram illustrates institutional-logics assumptions applied to the research study (see Figure 5). Following Arrow 4, the diagram illustrates the reading-policy intention to directly influence the technical core of the classroom. Institutional logics assumes, however, that responses to reading policy may take place through mechanisms along Arrow 3, or Arrows 2 and 3, or Arrows 1, 2, and 3, but not directly along Arrow 4. This
study traced the microfoundational process along Arrow 1 to investigate complexity, along Arrow 2 and 3 to investigate microlevel processes including sensemaking and institutional work, and along Arrows 1, 2, and 3 to investigate how microlevel processes coalesce to influence the technical core of the classroom and ultimately policy coherence.

The institutional-logics approach has proven well suited to an analysis of macrolevel processes but less well suited to the analysis of microlevel processes or the recursive interaction of macro- and microlevel processes (Zilber, 2013). The integration of organizational sensemaking and institutional work perspectives expand the analytic power of the institutional-logics perspective.

**Figure 5.** The contextualized Coleman diagram depicting institutional logics assumptions.

**Organizational Sensemaking**

Organizational sensemaking is a microlevel process triggered by complexity. Organizational sensemaking is a process “prompted by violated expectations, that involves attending to and bracketing (framing) cues in the environment, creating intersubjective (collective) meaning through cycles of interpretation and action, and thereby enacting a more
ordered environment from which further cues can be drawn” (Maitlis & Christianson, 2014, p. 67). Four recurrent themes emerged from the sensemaking literature. Researchers conceptualize sensemaking as dynamic and “in an ongoing present in which past experience is projected on possible futures” (T. Hernes & Maitlis, 2010, p. 27). Cues in the form of violated expectations trigger sensemaking in a process through which “members confront events, issues, and actions that are somehow surprising and confusing” (Maitlis, 2005, p. 21). Individual sensemaking is social in the sense that culturally embedded agents make sense of external cues influenced by the “actual, imagined, or implied presence of others” (Allport, 1985, p. 3). Also, sensemaking creates “rational accounts of the world that enable action” (Maitlis, 2005, p. 21).

Environmental cues prompt or trigger sensemaking, perceived as violated expectations, or a discrepancy between the expected and actual state of the environment (Maitlis, 2005). Triggers include environmental jolts (Milliken, 1990), organizational crises (A. D. Brown & Jones, 2000), threats to organizational identity (Dutton & Dukerich, 1991; Elsbach & Kramer, 1996), and planned organizational-change initiatives (Balogun & Johnson, 2004; Gioia & Chittipeddi, 1991). Policies are “ambiguous, controversial, and are subject to collective sensemaking” (Scott, 2013, p. 54). Sensemaking creates “rational accounts of the world that enable action” or institutional work (Maitlis, 2005, p. 21).

Institutional Work

Institutional work describes the “practices of individual and collective actors aimed at creating, maintaining, and disrupting institutions” (Lawrence, Suddaby, & Leca, 2011, p. 53). The primary theoretical premise is that institutional structures and agent cognition and action relate recursively and just as institutional structures influence agent action and cognition, so does agent action and cognition influence the instantiation of institutional structures (Lawrence &
Suddaby, 2006; Lawrence et al., 2009, 2011). Theoretical assumptions include that institutional work is effortful (Lawrence, 1999), intentional (Battilana & D’Aunno, 2009; Emirbayer & Mische, 1998), and results in intended and unintended consequences (Lawrence & Suddaby, 2006).

Institutional work scholars view agents as engaged in three categories of institutional work: creating, maintaining, and disrupting institutions (Lawrence & Suddaby, 2006; Lawrence et al., 2009, 2011). Interested actors (Dacin, Goodstein, & Scott, 2002) and institutional entrepreneurs (DiMaggio, 1988; Eisenstadt, 1980) engage in foundational work to create institutions and political work to redefine rules, property boundaries, access to resources, belief systems, and meaning-making systems (Lawrence & Suddaby, 2006, p. 221). Agents concerned with issues of efficiency engage in two types of work to maintain institutions, adherence to rules and systems, and reproducing existing norms and beliefs (Lawrence & Suddaby, 2006, p. 230). Agents who disrupt institutions are institutional entrepreneurs or actors who use strategies to alter institutional arrangements rather than conforming to intuitional arrangements (Maguire, Hardy, & Lawrence, 2004). Institutional entrepreneurs engage in three types of institutional work to disrupt institutions including changing rewards and sanctions; disassociating practices, rules, or technologies from their moral foundations; and undermining core assumptions and beliefs (Lawrence & Suddaby, 2006, p. 235–237).

**Method of Analysis: The Microfoundational Process of Institutional Logics**

Institutional logics provides a guiding theory and a method of analysis (Thornton et al., 2012). This research study used the method of analysis, the microfoundational process of institutional logics, to trace the hidden social mechanisms at multiple systems levels between the
input of reading policy and the output of various degrees of reading-policy coherence.

Institutional logics, work, and sensemaking perspectives were central to the method of analysis.

The microfoundational process of institutional logics initiates at the macrolevel through the introduction of an external pressure with logics that conflict with existing internal logics. Complexity or the conflict between the external and internal logics activates embedded agents’ available and accessible cultural knowledge. Then, agent attention activates their identity, goals, and schemas that inform social interactions surrounding the conflicting logics. Next, social interactions generate collective communication surrounding the conflicting logics. Communication initiates practices such as resource sharing, the enactment of routine practices and structures, interdependencies, sensemaking, decision-making, and institutional work. Finally, actors use agency and partial autonomy to select logics they will incorporate into the institutional culture. Two outcomes emerge from microfoundational processes: cultural resistance and institutional logic stability or a cultural revolution, and institutional logic transformation (paraphrased from Thornton et al., 2015, p. 85). Figure 6 diagrams the method of analysis.
Hidden Microfoundational Factors and Processes

After decades investigating why educational policy fails to influence the technical core of the classroom, Cuban (2013) observed that “the challenge comes down to questioning the causal linkages between structures, teaching practices and outcomes, linkages that few, if any, policy makers have considered explicitly or carefully” (p.3). Cuban’s logic guided a literature review to develop in-depth knowledge of the causal linkages or the factors and processes underlying institutional stability and transformation as set forth by seminal theorists. Literature reviewed spans three eras of institutionalism: old institutionalism featuring technical efficiency (pre-1970), new institutionalism with a focus on legitimacy (1970–1990), and contemporary institutional perspectives concerned with structure and agency (1990-the present).

Organization of the literature review appears in Table 6.
### Table 6

*Literature Review Organization*

<table>
<thead>
<tr>
<th>Agent factors</th>
<th></th>
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<tbody>
<tr>
<td>Duality of agency and structure</td>
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<tr>
<td>Dimensions of agency</td>
<td></td>
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<tr>
<td>Institutional entrepreneurs as embedded agents</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Microfoundational processes</th>
<th></th>
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<tbody>
<tr>
<td>Institutionalization</td>
<td></td>
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<tr>
<td>Legitimacy and the legitimation process</td>
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<tr>
<td>Isomorphism and isomorphic change</td>
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<tr>
<td>Complexity and responses to complexity</td>
<td></td>
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<tr>
<td>Leader sensegiving</td>
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### Agency

Agency “refers to an actor’s ability to have some effect on the social world” by “altering rules, social ties, or distribution of resources” (Scott, 2008, p. 93). Scott’s (2013) definition of agency rejects the philosophy of institutional determinism or the belief that an actor’s behavior is determined by the institutions they inhabit (DiMaggio & Powell, 1983; Hinings & Greenwood, 1988; Meyer & Rowan, 1977; Tolbert & Zucker, 1983). Further, Scott’s definition embraces the philosophy of institutional volunteerism or the belief that actors exercise free will and are therefore autonomous, proactive, and self-directed (Burrell & Morgan, 1979).

### Dimensions of Agency

Institutional work assumes three temporally oriented dimensions of agency including iteration, projectivity, and practical evaluation (Emirbayer & Mische, 1998) that enable three types of institutional work: creating, maintaining, and disrupting institutions (Lawrence & Suddaby, 2006). The iteration dimension of agency relates to the past and is the “selective reactivation by actors of past patterns of thought and action” (Emirbayer & Mische, 1998, p.
The projective dimension of agency relates to the future and is “an imaginative engagement in the future” (Emirbayer & Mische, 1998, p. 994). The practical-evaluative dimension of agency relates to the present and “responds to the demands and the contingency of the present” (Emirbayer & Mische, 1998, p. 994). Although one dimension of agency may be dominant, all three dimensions of agency exist concurrently and in varying degrees in any instantiation of action (Battilana & D’Aunno, 2009). Dimensions of agency and associated institutional work are organized in Table 7.

**Institutional Entrepreneurs as Embedded Agents**

Institutional entrepreneurship involves the “activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones” (Maguire et al., 2004, p. 657). Institutional entrepreneurs reject existing institutional rules, practices, and logics and work to institutionalize new rules, practices, and logics (Battilana, 2006). Institutional entrepreneurs compete to express ideas and to influence how ideas are institutionalized (Hardy & Maguire, 2008). Institutional entrepreneurs also employ cultural entrepreneurship. Cultural entrepreneurship refers to how individuals, groups, and organizations use mechanisms of framing, categorization, and storytelling to facilitate understanding, justification, and legitimation of an innovation (Lounsbury & Glynn, 2001). Agents embedded in the same organization do not share the same propensity to engage in institutional entrepreneurship (Clemens & Cook, 1999). Agents who have autonomous reflexivity (reflect apart from the dominant logics and organizational community) are more prone to entrepreneurial behavior (Archer, 2003).
Table 7

*Dimensions of Agency and Forms of Institutional Work*

<table>
<thead>
<tr>
<th>Iterative agency</th>
<th>Practical-evaluative agency</th>
<th>Projective agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating institutions</td>
<td>Improving</td>
<td>Translation</td>
</tr>
<tr>
<td></td>
<td>Modifying</td>
<td>Bricolage</td>
</tr>
<tr>
<td>Maintaining institutions</td>
<td>Enacting institutionalized practices</td>
<td>Adapting institutionalized practices</td>
</tr>
<tr>
<td></td>
<td>Selecting one legitimate practice over another</td>
<td>Bolstering regulative mechanisms</td>
</tr>
<tr>
<td>Disrupting institutions</td>
<td>Failure to enact an institutionalized practice</td>
<td>Avoiding institutional monitoring and sanction</td>
</tr>
<tr>
<td></td>
<td>Institutional forgetting</td>
<td>Not selecting institutional practices/ selecting others</td>
</tr>
</tbody>
</table>


**Entrepreneurial Opportunities**

Jolts or crises that threaten the existing institutional structures enable institutional entrepreneurship (Greenwood, Suddaby, & Hinings, 2002; Oliver, 1991). Jolts include social upheaval, competitive interruptions, technical disruption, regulatory changes (Oliver, 1991), and field-level crises (Philips, Lawrence, & Hardy, 2004). Jolts interrupt the status quo and the resulting uncertainty provides opportunity for innovation (Greenwood et al., 2002). Institutional heterogeneity also creates opportunity for institutional entrepreneurship (Jepperson, 1991). Practices, norms, and values that are not fully institutionalized promote agent autonomy and increase entrepreneurial behavior (Tolbert & Zucker, 1996). Organizations that operate at the periphery of organizational fields and that are less concerned with maintaining the status quo provide a more significant opportunity for institutional entrepreneurship (Leblebici, Salancik, Copay, & King, 1991).
Microfoundational Processes

Institutionalization

Institutionalization is an ongoing and iterative process (Jepperson, 1991; Leblebici et al., 1991; Meyer & Rowan, 1977; Stinchcombe & March, 1965; Zucker, 1977). Institutionalization occurs over time as “social practices become institutionalized only in the sense that they achieve collective meaning” (Dobbin, 1994, p. 228). Collective meaning emerges through sensemaking (Maitlis & Christianson, 2014; Weick, 1995).

The Institutionalization Process

Institutionalization begins when a small number of local actors in an organization develop, justify, and accept an innovation. The process continues as they diffuse the innovation beyond the boundaries of the local organization and a broader organizational field accepts the innovation, legitimizing the innovation. Legitimized innovations are institutionalized. Early innovation adopters in an organization accept innovations based on a need for greater technical efficiency (Zucker, 1983). In contrast, later adopters outside of the organization accept innovations based on a need for greater legitimacy (Zucker, 1983). Institutionalization is an ongoing and iterative process achieved through the execution of routine behaviors (Fararo & Skvoretz, 1986, p. 224). The routine processes that reproduce institutions continue unless disrupted by an external environmental shock or collective action (Jepperson, 1991).

Legitimation

New institutionalists assume that organizational credibility and survival depend on an organization’s perceived legitimacy in an organizational field (Meyer & Rowan, 1977; Scott, Ruef, Mendel, & Caronna, 2000). Legitimacy is “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system
of norms, values, beliefs, and definitions” (Suchman, 1995, p. 574). From an institutional perspective, organizations are rewarded for legitimacy or the appearance of coherence with other organizations in the same environmental field, but not for technical efficiency or the quantity, quality, and efficiency of their outputs (Meyer & Scott, 1983). Organizational viability depends on “ongoing cultural endorsement” (Scott, 2013, p. 45). To achieve cultural endorsement, an institutional culture must be represented publicly (Thornton et al., 2015). Institutional culture is defined as follows:

Shared basic assumptions that are, invented, discovered, or developed by a given group as it learns to cope with its problem of external adaptation and internal integration in ways that have worked well enough to be considered valid, and, therefore, can be taught to new members of the group as the correct way to perceive, think, and feel. (Weick & Sutcliffe, 2001, p. 121)

Legitimacy is conceptualized from two perspectives: an institutional lens and a strategic lens (Suchman, 1995). The institutional perspective focuses on the impact of external societal beliefs in legitimacy attainment. The strategic perspective focuses on the management of legitimacy to reach legitimation goals. Types of legitimacy include pragmatic (interest), moral (right), cognitive (taken-for-granted; Suchman, 1995), regulatory (authority), and normative (morally desirable; Scott, 2013).

Legitimacy is the product of the subject of legitimation’s relationship to rules, laws, norms, values, and cognitive frameworks situated in the external environment (Deephouse & Suchman, 2008). Subjects of legitimation are “those critical entities, structures, actions, and ideas whose acceptability is being assessed” (Suchman, 1995, p. 583). Examples of subjects include acts, rules, procedures, routines, distributions, positions, groups, teamwork, authority structures, organizational symbols, practices, services, programs, power regimes, and systems of equity (C. Johnson, 2004, pp. 10–11). Sources of legitimacy “are the internal and external
audiences who observe organizations and make them legitimate” (Ruef & Scott, 1998, p. 880). Examples of sources of legitimacy include professional legitimating sources such as professional training and credentialing, and normative legitimating sources such as external audience approval (Deephouse & Suchman, 2008). The legitimacy of subjects varies over time in ongoing legitimation processes (Ashforth & Gibbs, 1990; Maurer, 1971; Walker & Zelditch, 1993).

**The Legitimation Process**

Legitimation is a process involving individual, collective, and organizational action over time (C. Johnson, Dowd, & Ridgeway, 2006). A subject is considered legitimized once it receives cultural endorsement from outside the boundaries of the local organization (Scott, 2013; Suchman, 1995). Legitimation occurs in a four-stage process of innovation, local validation, diffusion, and general validation (C. Johnson et al., 2006). During innovation, local actors create and justify a social innovation designed to meet a local need or goal. Stakeholders accomplish justification as local innovation proponents practice sensegiving and promote and defend the alignment of the innovation with local needs, goals, and culture. An innovation that remains locally uncontested is implicitly accepted and, thus, locally validated. Diffusion occurs as the locally validated innovation—now, a prototype—is generalized and adopted in settings outside of the local context. From successful diffusion, a new cultural schema emerges, the innovation is recognized as a valid fact, and the innovation attains general validation. Once established as a valid fact in the larger environment, the innovation is legitimated.

Early innovation adopters accept innovations based on a need for greater technical efficiency, and later adopters accept innovations based on a need for greater legitimacy (Zucker, 1983). From the perspective of the institutional logics theory, organizational legitimacy is attained through the alignment of an institution’s logics with the normative expectations of the
larger social system in which the institution is embedded (Dowling & Pfeffer, 1975; Suchman, 1995). Achieving legitimacy contributes to organizational isomorphism.

**Isomorphism**

Isomorphism is a “constraining condition that forces one unit in a population to resemble other units that face the same set of environmental conditions” (DiMaggio & Powell, 1983, p. 149). Isomorphism describes a process of change in which organizations develop homogeneity with other organizations in the same organizational field (Meyer & Rowan, 1977). Organizational fields connected by “powerful forces” such as competition, policy, law, and professionalism compel organizations to be similar to each other (DiMaggio & Powell, 1983, p. 149).

**Isomorphic Change**

Institutionalists describe two types of isomorphic change: competitive and institutional (DiMaggio & Powell, 1983; Fennell, 1980; Meyer & Scott, 1983). In competitive isomorphic change, organizations exercise rationality and choose to change in response to external environmental pressure (Hannan & Freeman, 1977). In contrast, in institutional isomorphic change, environmental pressures force organizational conformity to external environment pressure (Kantor, 1972).

Three “institutional mechanisms” facilitate isomorphic change: coercive, mimetic, and normative (DiMaggio & Powell, 1983, p. 150). Institutional mechanisms “develop and disseminate a common set of rules and institutional pressures across organizations that result in all organizations within the same organizational field adopting the same structure and processes” (DiMaggio & Powell, 1983, p. 150). Coercive isomorphism describes an organization’s need to conform to political pressures to maintain legitimacy. In mimetic isomorphism, conditions of
environmental uncertainty and ambiguity create a need for organizations to model themselves after a legitimate ideal type. Normative isomorphic change emerges from professionalization, training similarities, and conformity to credentialing norms. Isomorphic change is not motivated by an organization’s desire to increase technical efficiency, but by an organization’s need for legitimacy (DiMaggio & Powell, 1983; Meyer & Rowan, 1977).

Responses to Complexity

Complexity is the interaction of “incompatible prescriptions from multiple institutional logics” (Greenwood et al., 2011, p. 317). Organizational responses to complexity include processes of decoupling, compromising, or combining (Pache & Santos, 2013). To decouple is to separate (Merriam-Webster, 2020). Decoupling occurs under conditions of competing external and internal logics when organizations separate prescriptive and normative structures from operational structures (Bromley & Powell, 2012; Meyer & Rowan, 1977). Decoupling is defensive or strategic. Defensive decoupling maintains internal efficiency (Boxenbaum & Johnson, 2008). Strategic decoupling manages external impressions to attain or protect legitimacy (Elsbach & Sutton, 1991). In the short-term, decoupling reduces threats to legitimacy (Boxenbaum & Johnson, 2008), but over time, the misalignment between normative and operational structures causes conflict that erodes organizations (Pache & Santos, 2013).

Compromising occurs under conditions of competing internal logics as organizations attempt to reconcile conflicting logics through acts of minimal compliance, partial compliance, and bargaining (Pache & Santos, 2013). In the short-term, compromising allows organizations to demonstrate good faith through the partial combination of competing logics and temporarily protects legitimacy (Meyer & Rowan, 1977). Over time, however, partial compliance becomes exposed and leads to the loss of legitimacy (Pache & Santos, 2013).
Combining also occurs under conditions of competing internal logics as organizations attempt to reconcile competing logics through a process of selective coupling (Pache & Santos, 2013). In this way, organizations engage in a “legitimation project,” leading to “strategic isomorphism” (Aurini, 2006). In a legitimation project, organizations continually interpret external-environment cues to inform strategic coupling activities to attain legitimacy in the external environment (Aurini, 2006). Strategic isomorphism describes an organization’s creation rather than adoption of templates leading to legitimacy (Aurini, 2006). Recombining established institutional logics in this way leads to a new hybrid logic and eliminates organizational complexity (Tracey, Phillips, & Jarvis, 2011).

Individuals experience complexity when role-related logics associated with different institutional orders conflict (e.g., family, community, religion, state, market, profession, or corporation). In a process that parallels organizational responses to complexity, actors respond to complexity by assuming partial autonomy (loose coupling) with institutional roles (Thornton et al., 2015). Partial autonomy allows actors the freedom to reconfigure, recombine, and create new logics, to engage in sensemaking strategies, and to participate in institutional work leading to the creation, maintenance, and disruption of institutions (Thornton et al., 2015). Individual actors with partial autonomy are embedded in, but also partially autonomous from institutional structures, allowing them to construct institutions socially (Berger & Luckmann, 1967).

**Leader Sensegiving**

Leaders influence logic transformation through sensegiving, or “the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442). Agents’ responses to leader sensegiving include appropriation, resistance, or rejection (Gioia & Chittipeddi, 1991).
In 2005, Maitlis conducted a study investigating leader sensegiving practices and associated agent sensemaking responses. Four distinct patterns of sensegiving and associated sensemaking emerged. In the first pattern, leaders provide guided sensegiving, controlled and animated in planned, structured, engaging meetings with the entire organization. Agents respond to guided sensegiving with the construction of a rich unified account and a series of consistent actions. In the second pattern, leaders provide fragmented sensegiving, animated but not controlled in impromptu unplanned social meetings with a segment of the organization. Agents respond to fragmented sensegiving with the construction of a variety of narrow accounts and a series of inconsistent actions. In the third pattern, leaders provide restricted sensegiving that is controlled but not animated in planned meetings to issue directives to the entire organization. Agents respond to restricted sensegiving with the construction of one narrow account and a one-time action or a planned set of consistent actions as an act of compliance. In the fourth pattern, leaders provide minimal sensegiving that is neither controlled nor animated when a segment of the organization unexpectedly ambushes the leader. Agents respond to minimal sensegiving with low levels of engagement and a one-time act of compliance. In a separate study conducted in 2001, Coburn found that leaders who conduct successful sensegiving intentionally influence where sensemaking happens, structure sensegiving in formal collaboration, present and privilege a preferred sensemaking message, and continually guide actor construction of sensemaking.

Research Gaps

Research guided by the institutional-logics perspective promises to provide unique insights but is just emerging. So far, research guided by the perspective foregrounds macrolevel processes (Cloutier & Langley, 2013; Hallett, 2010) and backgrounds microlevel processes and the recursive link between macro- and microlevel processes (Zilber, 2013, 2016). Also, a lack of
research surrounds sensemaking in response to complexity (Thornton et al., 2015), agency (Battilana & D’Aunno, 2009; Reay, Golden-Biddle, & Germann, 2006), and the role of leadership in institutional work (Kraatz, 2009; Washington, Boal, & Davis, 2008). Finally, although policy implementation unfolds at different levels of the educational system simultaneously (Cohen & Spillane, 1992), most research guided by the institutional-logics perspective focuses on policy implementation isolated in single policy environment and neglects to investigate policy implementation simultaneously at multiple system levels (Aldrich, 2009; Coburn, 2016).

Unrelated to the theoretical perspective, but equally significant, empirically sound education research focusing on reading in rural settings is scarce (Arnold et al., 2005; Cicchinelli & Barley, 2010; Institute of Educational Sciences, 2018). This mixed methods research study fills research gaps by using a comparative-case-study approach to explain the microfoundational processes in and across multiple interinstitutional systems levels underlying variations in degrees of reading-policy coherence in small rural schools.

**Summary and Next Steps**

Chapter 3 introduced the integrated theoretical framework guiding the research study—the institutional-logics perspective (Thornton et al., 2012)—embedded with institutional work (Lawrence & Suddaby, 2006) and organizational-sensemaking perspectives (Maitlis & Christianson, 2014). The framework provides a guiding theory and a method of analysis. The dissertation study used the approach to analysis to trace microfoundational processes across multiple systems levels. Chapter 4 details the mixed methods research study designed to expose and explain the microfoundational processes hidden in rural reading-instruction cultures between
the structural input of reading policy and the cultural output of various degrees of reading-policy coherence.
Chapter 4

Study Research Methods

This research study used a specific mixed methods research design to explain variation in degrees of reading-policy coherence. In mixed methods studies, a researcher collects and analyzes both qualitative and quantitative data rigorously in response to research questions and hypotheses, integrates (or mixes or combines) the two forms of data and their results, organizes these procedures into specific research designs that provide the logic and procedures for conducting the study, and frames these procedures within a theory and philosophy. (Creswell & Plano Clark, 2017, p. 15)

The central rationale for mixing quantitative and qualitative methods in a single study is that together the two methods provide a more complete understanding of the numerical trends and social details underlying a phenomenon than either method could alone (Tashakkori & Teddlie, 2003). The specific mixed methods approach used in this research study was an explanatory sequential mixed methods research design.

Explanatory Sequential Mixed Methods Research Design

The explanatory sequential mixed methods research design is characterized by two distinct phases: an initial quantitative data-collection and analysis phase followed by a qualitative data-collection and analysis phase (Creswell & Plano Clark, 2017; Ivankova et al., 2006). The primary objective for using an explanatory sequential design is to use second-phase qualitative results to explain first-phase quantitative results (Creswell & Plano Clark, 2017). Secondary objectives include using the first-phase quantitative results to inform the purposeful selection of a smaller qualitative sample from the larger quantitative sample and to explain the qualitative mechanisms underlying the quantitative results (Creswell & Plano Clark, 2017). This research study used a QUAN \rightarrow \text{qual} = \text{sequence}, prioritizing the quantitative (QUAN) phase and
qualitative (qual) results explained (=) quantitative results. Figure 7 diagrams this explanatory sequential design.

![Diagram of the explanatory sequential mixed methods design](image)

*Figure 7. Diagram of the explanatory sequential mixed methods design.*


**Rationale**

Mixed method researchers select one of three core typology-based designs: explanatory sequential, exploratory sequential, or convergent (Creswell & Plano Clark, 2017). Design selection rests on the alignment between study intent and the mixed methods design intent. The intent of an exploratory sequential design is to use first-stage qualitative results to inform the development of the second-stage quantitative measure or to use quantitative results to confirm and generalize qualitative findings. The intent of the convergent design is to compare quantitative and qualitative results to comprehensively understand a problem. The intent of an explanatory sequential mixed method design is to use the qualitative results to explain the quantitative results. My intent was not to compare, as in the convergent design, or to develop a measurement instrument, as in the exploratory sequential design, but to explain, as in the explanatory sequential design.

**Philosophical Worldview**

A philosophical worldview is “a basic set of beliefs that guide action” (Guba, 1990, p. 17) and a philosophical disposition that researchers bring to the process of inquiry (Creswell, 2013). In an explanatory sequential design, the worldview and philosophical assumptions
underlying the study shift during the two phases of the study (Creswell & Plano Clark, 2017). Postpositive assumptions inform the initial quantitative phase of the study, and the researcher brings dispositions of determination, reductionism, empirical observation, empirical measurement, and theory verification to the quantitative inquiry process. Constructivism assumptions inform the second qualitative phase of the study, and the researcher brings dispositions toward understanding multiple participant meanings, social and historical construction, and theory generation to the process of qualitative inquiry.

The merging of two worldviews in a single study results in dialectical pluralism. Dialectical pluralism is a process used to “carefully, systematically, and thoughtfully listen, understand, and learn from multiple paradigms” (R. B. Johnson, 2017, p. 156). Dialectical pluralism supports a more thorough analysis of the phenomenon of interest than could be attained using a single worldview.

**Qualitative and Quantitative Integration**

Integration is an intentional process that occurs when researchers interrelate or link quantitative and qualitative methods of data collection and analysis in a single study (Creswell & Plano Clark, 2017; Guetterman, Fetters, & Creswell, 2015). In this explanatory sequential study, data integration occurred through three distinct processes—connecting, building, and merging—at two critical junctures: after the first quantitative phase and again after the second qualitative phase. Integration after the first quantitative phase occurs through connecting and building (Fetters, Curry, & Creswell, 2013). Integration through connecting occurs as researchers use quantitative data to generate a qualitative sample (Fetters et al., 2013). In this study, quantitative results informed the purposive selection of two extreme deviant cases: one school with the highest and one school with the lowest degrees of policy coherence. Integration through building
occurs when “one database informs the data collection approach of the other” with the “latter building on the former” (Fetters et al., 2013, p. 2140). Building occurred as this study used quantitative results to inform the development of the semistructured interview protocol.

Integration through merging occurs after the quantitative and qualitative phases when researchers integrate qualitative data with quantitative data to provide a more nuanced explanation of the quantitative results (Fetters et al., 2013). Merging occurred as this study used the qualitative interview results to explain quantitative results of degrees of variation in reading-policy coherence. Figure 8 shows points of integration in this explanatory sequential study.

**Figure 8.** Diagram of the points of integration in an explanatory sequential mixed methods design.


**Theoretical Framework**

Chapter 3 presented the integrated theoretical framework that guided this research study—the institutional-logics perspective (Thornton et al., 2012)—embedded with institutional work (Lawrence & Suddaby, 2006) and organizational sensemaking perspectives (Maitlis & Christianson, 2014). The framework provides a guiding theory and a method of analysis: the microfoundational process of institutional logics.
Study Purpose and Objectives

The purpose of this explanatory sequential mixed method study is to explain a complex phenomenon, differences in the degree of coherence between reading-policy goals and institutionalized reading-instruction practices in 16 small rural schools by first obtaining quantitative results from a review of implemented reading curriculums and observations of reading-instruction practices, followed by purposefully selected extreme deviant-case samples to explore the quantitative results in greater depth using interviews. The quantitative study objective is to identify the degree of coherence between reading-policy guidelines and institutionalized reading-instruction practices. The qualitative study objective was to uncover hidden microfoundational processes underlying variations in the degree of reading-policy coherence. The mixed methods study objective was to use the qualitative results to explain the quantitative results.

Research Questions

The study was guided by quantitative, qualitative, and mixed methods research questions. Quantitative research questions focused on identifying the degree of coherence between federal reading-policy guidelines to use scientifically-based reading instruction (NCLB, 2001) and evidence-based reading curriculums (ESSA, 2015) and actual reading-instruction practices. Qualitative research questions focused on exploring the hidden microfoundational processes (e.g., interpretation, sensemaking, interaction, and action) underlying the degree of coherence between reading-policy guidelines and reading-instruction practices. Mixed method research questions focused on using qualitative findings, or knowledge of microfoundational processes, to explain variation in degrees of reading-policy coherence. The following research questions guided this study.
Quantitative Questions

RQ1: What is the degree of coherence between reading-policy guidelines to teach reading using evidence-based curriculums and the curriculums implemented in 16 small rural school schools in Connecticut?

RQ2: What is the degree of coherence between reading-policy guidelines to teach reading using scientifically-based reading instruction and reading instruction practices institutionalized in 16 small rural school schools in Connecticut?

Central Qualitative Questions

RQ3: How do district leaders, principals, literacy leaders, and teachers explain variations in coherence between reading-policy guidelines and reading-instruction practices?

Qualitative Subquestions

RQ4: How do district leaders, principals, literacy leaders, and teachers describe reading-instruction practice in context?

RQ5: How do district leaders, principals, literacy leaders, and K–1 teachers disclose where complexity (conflicting logics) is located?

Mixed Method Questions

RQ6: How do district leaders’, principals’, literacy leaders’, and teachers’ descriptions of reading-instruction practices in context compare to one another?

RQ7: How do district leaders’, principals’, literacy leaders’, and teachers’ disclosure of where complexity is located compare to one another?

RQ8: In what way does the qualitative data collected from interviews with district leaders, primary school principals, literacy leaders, and K–1 teachers explain the
degree of coherence between reading-policy guidelines and institutionalized reading-instruction practices in 16 small rural schools in Connecticut?

**Sampling Strategy**

Researchers use sequential mixed method sampling strategies through consideration of the time orientation of the quantitative and qualitative phases and the relationship between the quantitative and qualitative samples (Onwuegbuzie & Collins, 2007). In this explanatory sequential study, the time orientation of the quantitative and qualitative phases was sequential (QUAN → qual), and the relationship between the quantitative and qualitative samples was nested. In a nested relationship, the second-phase qualitative sample is a smaller subset purposively selected from the larger first-phase quantitative sample (Onwuegbuzie & Collins, 2007). The next section describes quantitative and qualitative sampling schemes.

**Quantitative Sampling Scheme**

The first quantitative phase used a criterion-sampling scheme. In criterion-sampling schemes, the researchers purposively selects the setting, group, or individual using predetermined criteria (Onwuegbuzie & Collins, 2007, p. 286). In this study, the sample was a setting, and the predetermined criteria for inclusion was small and rural schools in a single Connecticut county. The U.S. Secretary of Education designates the classification of “rural” by federal district locale codes of 41 (Rural, Fringe), 42 (Rural, Distant), or 43 (Rural, Remote; Geverdt, 2018). The classification of “small” indicates fewer than 600 students attend daily or the county in which the school resides has a population density of fewer than 10 people per square mile (Small, Rural Achievement Program, 2018). In 2018, 16 schools in the designated Connecticut county met the criteria for small and for rural.
Qualitative Sampling Scheme

The second qualitative phase sample included two extreme deviant cases purposively selected from the quantitative sample. The two cases included one positive extreme deviant case—the school with the highest degree of reading-policy coherence—and one negative extreme deviant case: the school with the lowest degree of reading-policy coherence. Participants from each selected school included one superintendent, primary school principal, literacy leader, kindergarten teacher, and first-grade teacher. The rationale for using an extreme deviant-case sampling strategy is that through the selection of extreme outlying cases, researchers can conduct a comparative case analysis (Glaser, 1965; Onwuegbuzie & Collins, 2007).

In qualitative studies, estimating an adequate sample size hinges on the ability to predict a sample size that will most likely result in saturation (Morse, 1995). Saturation is the point at which “no additional data are found whereby the (researcher) can develop properties of the category” and when the researcher “sees similar instances over and over again,” and becomes confident that saturation is achieved (Glaser & Strauss, 2017, p. 65). Guest, Bunce, and Johnson (2006) analyzed transcripts of qualitative semistructured interviews to investigate how many interviews were enough to reach saturation. Guest et al. (2006) found that most interview themes emerged before the sixth interview and stated that “a sample of six interviews may be sufficient to enable development of meaningful themes” (Guest et al., 2006, p. 78). The qualitative phase of the study involved one 30–45 minute semistructured interview with each of 10 individuals, five from each extreme deviant case. A process of memoing revealed that saturation, evidenced by patterns of repeated answers revealing themes without the emergence of new information, emerged in each school before the fifth interview.
Recruitment Strategy

Recruitment Timing

Before recruitment efforts, the research study received approval from the Johns Hopkins University Homewood Institutional Review Board (IRB). Participants were recruited after IRB approval at least 6 weeks before study onset. Participants signed letters of consent before study participation. An example of the letter of consent appears in Appendix H.

Participants

Participants \((n = 10)\) were drawn from two small rural schools, one positive and one negative extreme deviant case. The five participants from each school included one superintendent, principal, literacy leader, kindergarten teacher, and first-grade teacher.

Recruitment Materials

Recruitment materials included one letter inviting participation in the study. Letters were sent electronically through e-mail. An example of the letter appears in Appendix I.

Incentives

Compensation was not offered for participation. However, superintendents from participating schools may elect to receive a report describing the degree of coherence between reading-policy goals and the school’s reading curriculum and instructional practices along with an abstract detailing study findings.

The First Quantitative Phase

Quantitative research is “an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures” (Creswell & Creswell, 2017, p. 2). The first quantitative phase included two components: a curriculum review
and structured observations. The primary purpose of the first quantitative phase was to evaluate the degree of coherence between federal reading-policy guidelines to teach reading using scientifically-based reading instruction (NCLB, 2001; REA, 1998) and evidence-based reading curriculums (ESSA, 2015) and reading-instruction practices institutionalized in the 16 designated schools. The first quantitative phase had two secondary objectives: to inform the purposeful selection of the qualitative sample and to inform the development of the qualitative interview protocol. The following section describes the variables of interest, instruments used to measure variables, data collection, storage, and analysis procedures, and quantitative validity and reliability issues. Figure 9 provides a procedural diagram for the mixed methods study.

**Variables of Interest**

**Evidence-Based Curriculum**

A curriculum is evidence-based when it has been determined by a peer-reviewed randomized control study, quasiexperimental study, or correlational study to have a statistically significant effect on improving student outcomes (ESSA, 2015; International Reading Association, 2004).

**Scientifically-Based Reading Instruction**

Scientifically-based reading instruction includes instruction of the five essential components of reading, phonemic awareness, phonics, fluency, vocabulary, and comprehension (NRP, 2000). Scientifically-based reading instruction is most effective when delivered explicitly, systematically, and with varying degrees of frequency, duration, and intensity in response to individual child variation (Florida Center for Reading Research: Reading First Guidance Document, 2002, as cited by Al Otaiba et al., 2005). Table 1 provides definitions of each of the five essential components of reading.
Curriculum Review Instrument

The degree of coherence between federal reading-policy guidelines to use evidence-based reading curriculums (ESSA, 2015) and reading curriculums implemented in 16 small rural schools was evaluated through a document-analysis using the grades K–2 subsection of The Rubric for Evaluating Reading/Language Arts Instructional Materials for Kindergarten to Grade 5 (Rubric; Foorman et al., 2017). The K–2 subsection of the Rubric is organized into five content
areas containing 35 items. The authors directed reviewers to examine all components of a reading curriculum, and to record the degree each rubric criterion is met using a scale of 1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, to 5 = completely met.

Reviewers complete the K–2 Rubric using an accompanying guidance document, and six What Works Clearinghouse Practice Guides (Baker et al., 2104; Foorman et al., 2016; Gersten et al., 2008; Graham et al., 2012; Kamil et al., 2008; Shanahan et al., 2010). The development information that follows was from the Rubric, a development paper (Al Otaiba et al., 2005), an interview with an author of the development paper and the Rubric, and the Rubric description on the Regional Educational Laboratory website. A sample from the Rubric appears in Appendix J.

Development

The Florida Center for Reading Research developed the Rubric (Foorman et al., 2017) in response to a request from the Improving Literacy Research Alliance, a division of the Florida Department of Education. The purpose of the Rubric is to provide educators with a rigorous tool to evaluate the degree to which reading instructional materials align with rigorous research and standards. Six What Works Clearing House practice guides informed the development of the Rubric (Baker et al., 2014; Foorman et al., 2016; Gersten et al., 2008; Graham et al., 2010; Kamil et al., 2008; Shanahan et al., 2010) and the Florida Center for Reading Research Rating Form for Curricular Materials (FCRR Form; Al Otaiba et al., 2007). The FCRR Form was used between 2002 and 2008 to evaluate the degree of the alignment between K–1 reading instructional materials with rigorous research and standards to judge appropriateness for implementation in Reading First Schools. The Florida Center for Reading Research Reports published a series of findings. Appendix J contains the K–2 Rubric.
Reliability and Validity

Literacy Research Alliance members and literacy coaches involved in Mississippi’s K–3 early literacy professional development initiative (Folsom, Smith, Burk, & Oakley, 2017) reviewed the K–5 Rubric. They reported evidence of face and content validity. Interrater reliability was not established, and the developers recommended that two or more reviewers use the K–5 Rubric to evaluate each curriculum independently and then use Krippendorff’s alpha (2011) to calculate interrater reliability (Foorman et al., 2017).

Curriculum Review Procedures

The Rubric (Foorman et al., 2017) was used to conduct a document analysis to review reading curriculums implemented in kindergarten and first grade in the 16 designated schools. Document analysis is a “systematic procedure for reviewing or evaluating documents—both printed and electronic” (Bowen, 2009, p. 27). A curriculum includes the “teaching materials such as those that can be found in commercial textbooks and software applications” (Whitehurst, 2009, p. 1). Curriculums reviewed included the Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching (Fountas & Pinnell, 2017), Fundations: Wilson Language Basics for K–3 (Wilson, 2002), Units of Study for Grades K and 1 (Calkins et al., 2015), and Words Their Way (Bear, Invernizzi, Templeton, & Johnston, 2015). The Rubric was completed after an extensive review of all curriculum components and online resources available through curriculum companion websites.

Data Collection and Storage

An electronic versions of the Rubric (Foorman et al., 2017) was completed for each reading curriculum implemented in the 16 designated schools. Electronic versions of the Rubric were stored in a password-protected file on a password-protected laptop computer.
Data Analysis

Results were analyzed using a numbered scale (1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, and 5 = completely met) to indicate the degree of coherence between reading curriculums and reading-policy guidelines to teach reading using evidence-based reading curriculums. Descriptive statistical procedures were used to organize and analyze quantitative data drawn from the curriculum review.

Curriculum Review Reliability and Validity

Validity refers to the extent to which an indicator measures what it purports to measure (Carmines & Zellar, 1979; Nunnally, 1967). As noted above, experts provided evidence of the face and content validity of the Rubric (Foorman et al., 2017); these were Literacy Research Alliance members and literacy coaches involved in a study of Mississippi’s K–3 early literacy professional-development initiative (Folsom et al., 2017).

Reliability is the extent to which a measure produces similar results over repeated uses (Carmines & Zellar, 1979; Nunnally, 1967). With just one coder, an instrumentation threat to reliability may have been low intrarater reliability. An instrumentation threat to reliability occurs when an instrument lacks consistency across repeated applications (Onwuegbuzie & McLean, 2003). Low intrarater reliability instantiates when the coding of a single coder is inconsistent across repeated uses of an instrument.

Multiple steps reduced the single-coder threat to reliability. First, the research cited for each indicator maintained consistency and objectivity in judging alignment. Once curriculum reviews were completed, I contacted curriculum experts, including publishers, trainers, and consultants, to review my findings. In each instance, curriculum experts explained that company policy prevented them from speaking with me. Next, a high-level literacy specialist at a state
educational resource center provided e-mail introductions to high-end users and local trainers unaffiliated with publishers. E-mail introductions and follow-up e-mails were ignored. Finally, my methods advisor suggested a meeting with Kosanovich, one of the authors of the Rubric (Foorman et al., 2017). Kosanovich evaluated the curriculum-review process and stated that it was likely consistent across reviews and objectives, and was aligned with the review process expected by the authors of the Rubric.

Structured Observation Instrument

The degree of coherence between reading-policy guidelines to implement scientifically-based reading instruction (NCLB, 2001; REA, 1998) and reading-instruction practices in context was evaluated using the Principal’s Reading Walk-Through Checklists: Kindergarten–Grade 3 (PRWT Checklist; Tanner-Smith, Jordan, Kosanovich, & Weinstein, 2009). The PRWT Checklist is organized by grade level across 10 categories of reading instruction. Depending on grade level, each PRWT Checklist contains 14 or 15 sections and between 48 and 52 indicators. The authors directed evaluators to observe classroom-reading instruction and to record the degree to which they judge each checklist item is evident using a response code (1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine).

Several resources supported evaluators’ understanding and reliable use of the PRWT Checklist, including a professional-development module, a PowerPoint presentation with a script, online support resources, an accompanying practice guide, a review of research that informs each indicator, and multiple practice exemplars for each indicator. The development information that follows came from the PRWT Checklist, an interview with one author of the PRWT Checklist, and online support resources. Samples of the kindergarten and first-grade PRWT Checklists appear in Appendices K and L.
Development

The authors developed the PRWT Checklist to structure observations to increase the accuracy of school-leader evaluations of scientifically-based reading instruction practices in K–3 classrooms. The intent was that evaluators would use PRWT Checklist results to inform responsive professional development and coaching to increase teacher capacity to implement scientifically-based reading instruction.

Reliability and Validity of Observations

According to Michaels (1983), “very few observational studies reach a satisfactory level of reliability” (p. 221). Reliability of observational studies increases, however, when a limited range of behaviors is investigated and when those behaviors are precisely operationalized, limiting the number of inferences required during analysis (Gellert, 1955, as cited in Michaels, 1983). Similarly, validity is difficult to establish in observational research (Michaels, 1983). Validity and reliability increase through the “selection of simple behavior categories requiring little observer interpretation or inference” (Michaels, 1983, p. 222).

During observations in this study, the behavior of interest was limited to the incidence, duration, and quality of the implementation of scientifically-based reading instruction. Scientifically-based reading instruction is limited to five discrete behaviors, each of which are distinctly operationalized in the tool. Finally, first-phase quantitative observations were followed with second-phase qualitative interviews. The rationale for conducting interviews and observations is that in conjunction, they provide “relatively objective firsthand information” (B. Johnson & Turner, 2003, p. 314). Also, observation findings triangulate and substantiate interview findings and vice versa (Merriam, 1998).
**Observation Procedures**

A series of two 90–120 minute structured observations was conducted in one kindergarten and one first grade classrooms in each of the two extreme deviant-case schools. Observations were conducted using a nonparticipant approach without involvement in classroom processes. The rationale for a nonparticipant approach is that if the observer is uninvolved in classroom processes, the observer can concentrate on all aspects of the behaviors of interest (Zohrabi, 2013). Behaviors of interest included the incidence, duration, and quality of whole-group, small-group, and one-to-one scientifically-based reading instruction.

**Data Collection**

Structured observations use coding to collect data (Lewis-Beck, Bryman, & Liao, 2003). Initially, observations were recorded using a prepared paper observation form and an abbreviation key (see Appendix M). All reading-related events and behaviors during the observation period were recorded. Later, observation notes were coded using the PRWT (Tanner-Smith et al., 2009).

**Data Storage**

Once coded, observation forms were scanned and stored electronically on a password-protected laptop computer. Once scanned and stored, the original paper observation forms were destroyed.

**Data Analysis**

Quantitative data drew from structured observations, organized and analyzed using descriptive statistical procedures.
Data Integration

Following the initial quantitative phase, data integration occurred through processes of connecting and building (Fetters et al., 2013). Connecting was achieved when the quantitative data informed the purposive selection of the qualitative sample (Fetters et al., 2013). The curriculum review revealed two extreme deviant cases: one school with the highest degree of reading-policy coherence and one school with the lowest degree of reading-policy coherence. Integration through building occurs when “one database informs the data collection approach of the other” with the “latter building on the former” (Fetters et al., 2013, p. 2140). The quantitative results informed the development of the second-phase qualitative-interview protocol.

The Second Qualitative Phase

In an explanatory sequential research design, a subsequent qualitative phase follows the initial quantitative phase. Creswell (2014b) explained that qualitative research is an “approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (as cited in Creswell, 2015, p. 15). The qualitative phase contains one component: semistructured interviews. The following sections describe the phenomenon of interest, the qualitative instrument, procedures, and validity strategies.

Central Phenomenon of Interest

This research study went beyond the goal of identifying input and output associations to provide mechanism-based explanations for the existence of a social phenomenon. The central phenomenon of interest was social mechanisms, or the microfoundational processes hidden in reading-instruction cultures between the input of reading policy and the output of various degrees of reading-policy coherence.
Social mechanisms are the “constellation of entities and activities that are linked to one another in such a way that they regularly bring about a particular type of outcome” (Hedstrom, 2005, p. 11). Mechanisms lie dormant with action potential until activated by complexity. Complexity arises when an externally imposed logic, in this case, the reading-policy logic, conflicts with an existing logic, in this case, the dominant logic of local reading-instruction practices (Greenwood et al., 2011). Microfoundational processes coalesce to either resist policy and protect existing logics and cultural practices or transform existing logics and cultural practices (Thornton et al., 2012). Figure 10 shows a mechanism-based explanation for reading-policy coherence.

![Diagram](image)

**Figure 10.** Diagrams mechanism-based explanation for degrees of reading policy coherence.

**Interviews**

Qualitative data accrued using semistructured interviews. Qualitative interviews use “open-ended questions and probes” and “yield in-depth responses about people’s experiences,
perceptions, feelings, and knowledge” (Patton, 2003, p. 2). Characteristics of semistructured interviews include that they are prescheduled outside of regularly occurring events, additional questions emerge and are explored during the interview process, and interviews usually last between 30 minutes and several hours (Whiting, 2008). Semistructured in-depth interviews were conducted using an interview protocol.

**Interview Protocol**

The rationale for using an interview protocol was to provide structure to interviews and to facilitate the collection of similar data from all respondents. Interview questions were designed to elicit responses that answered the research questions. Following Patton’s (2002) guidelines, interview questions centered on behavior or experience, opinion or value, feelings, knowledge, and demographic and background details (Patton, 2002). Following Bernard’s (2000, as cited by Whiting, 2008) guidelines, the interview protocol included a list of probing techniques and prompts to facilitate clarification, elaboration, and explanation. Questions were ordered with more general and readily answered questions presented first and more sensitive or difficult to answer questions presented later. Following Whiting’s (2008) guidelines, the interview protocol included an introductory script that explained the nature, purpose, and expected length of the interview, assurance of confidentiality, use and purpose of recording, the role of the researcher, the researcher’s expectation that there were no right or wrong answers to interview questions, assurance that respondents could decline to answer a question, and guidelines to ask questions.

Distinct advantages of using an interview protocol include that predetermined questions can be reworded and delivered in any sequence, new information can be probed as it emerges, flexibility facilitates the collection of large amounts of data, and the data collected can later be
compared and contrasted (Fraenkel & Wallen, 2003). Table 8 contains interview questions. The full protocol, including scripts and prompts, appears in Appendix N.

Table 8

*Semistructured Interview Protocol*

<table>
<thead>
<tr>
<th>Interview Questions</th>
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</thead>
<tbody>
<tr>
<td>1. What is your role in your organization?</td>
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<tr>
<td>2. How long have you served in this role?</td>
</tr>
<tr>
<td>3. How do you first learn of changes in policy guidelines or laws and rules intended to guide classroom instruction?</td>
</tr>
<tr>
<td>4. After you become aware of changes in policy guidelines, who or what helps you to interpret changes in policy guidelines?</td>
</tr>
<tr>
<td>5. Please describe how you communicate with others to interpret policy guidelines.</td>
</tr>
<tr>
<td>6. Please describe your interpretation of current reading policy guidelines.</td>
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<tr>
<td>7. How closely do your ideas about how reading develops and should be taught, line up with current reading policy guidelines?</td>
</tr>
<tr>
<td>8. How closely do you think other’s ideas about how reading develops and should be taught line up with current reading policy guidelines?</td>
</tr>
<tr>
<td>9. How have your responses and the responses of others to reading policies changed over time?</td>
</tr>
<tr>
<td>10. How would you describe the level of agreement between yourself and others about how reading develops and should be taught?</td>
</tr>
<tr>
<td>11. What factors and circumstances do you feel either prevent or help your ability to align instructional practices to policy guidelines?</td>
</tr>
<tr>
<td>12. Please describe the process your district users to select and implement nude curriculums.</td>
</tr>
<tr>
<td>13. Is there anything else you would like me to know?</td>
</tr>
</tbody>
</table>

**Data Collection**

Single 30–45 minute semistructured interviews were conducted with one superintendent, primary school principal, literacy leader, kindergarten, and first-grade teacher from the two extreme deviant case schools. In-person interviews were electronically recorded using a conferencing software, Zoom Rooms. Zoom Rooms software features an option to transcribe recordings immediately.

**Data Storage**

Interview transcripts were stored electronically in MAXQDA, a password-protected web-based software program on a password-protected laptop computer.
Validity

The quality of the interview protocol is critical to interview validity and inference quality because “the conclusions researchers draw are based on the information they obtain using the instrument” (Fraenkel & Wallen, 2003, p. 158). To provide evidence of content validity, or the degree to which the interview protocol represented all elements of the central phenomenon under study, several experts (rural educators and a graduate professor) reviewed the interview guide. To provide evidence of internal validity, or the degree to which study findings accurately represent the lived experience of respondents, interviews were pilot-tested. During each pilot interview, the interviewer’s interpretations of responses were shared with respondents to confirm that interpretations reflected respondents experiences and responses. To provide evidence of reliability, or dependability and consistency, interviews were conducted with a variety of sources, including superintendents, literacy leaders, principals, and teachers from the positive and negative cases. Finally, validity was increased through triangulation and the collection of data through separate processes, in this case, curriculum reviews and observations.

Qualitative Data Analysis of Two Extreme Deviant Cases

In the second qualitative phase of the study, two distinct datasets were analyzed. One dataset emerged from interviews of the negative extreme deviant case and the second dataset emerged from interviews of the positive extreme deviant case. The two datasets were analyzed separately using iterative waves of thematic analysis. The rationale for analyzing the two qualitative datasets independently is that if the datasets remained separate during qualitative thematic analysis, they could then be subjected to mixed methods cross-case analysis.
Case Defined

The study used the definition of case proposed by the comparative case researchers, Bartlett and Vavrus (2016). Traditional case-study researchers see a case as a phenomenon or system bounded in a context (i.e., district, school, or classroom; Creswell, 2013; Miles & Huberman, 1994; Yin, 2011). Comparative-case-study researchers reject the notion of the case as bounded in a place and instead see the case as a phenomenon processed socially in and across multiple contexts (Bartlett & Vavrus, 2016).

Thematic Analysis

In general, thematic analysis involves three broad strategies: “organizing data for analysis; … then reducing the data into themes through a process of coding and condensing the codes; and finally representing the data in figures, tables, or a discussion” (Creswell & Poth, 2018, p. 238). In thematic analysis, five phases delineate the data collection and the representation of findings: (a) managing and organizing data, (b) reading and memoing emergent ideas, (c) describing and classifying codes and themes, (d) developing and accessing interpretations, and (e) representing data visually (Creswell & Poth, 2018, p. 228).

This study used the lean-coding approach to thematic analysis described by Creswell and Poth (2018) organized into two phases: an initial deductive phase followed by the subsequent inductive phase described by Fereday and Muir-Cochrane (2006). One rationale for selecting the two-phase approach is that the approach increased the credibility of thematic analysis because it was logically and consistently structured and results could be presented transparently. A second rationale is that I was undertaking a complex multilevel cross-case analysis for the first time. The two-phase approach reduced the scope of the analysis and maintained objectivity and
equivocality across levels and cases while also allowing the emergence of new themes. A
description of the process follows.

In preparation for analysis, interviews were recorded and transcribed using Zoom. Then,
transcript text to audio recordings were compared to confirm transcription accuracy. As a final
step before analysis, transcript data was organized and secured using MAXQDA software.

**Deductive Phase**

Thematic analysis began deductively using an *a priori* codebook. The theoretical
framework informed code development and code names reflect the method of analysis, tracing
the microfoundational processes between the structural input of reading policy and the cultural
output of variation in degrees of reading-policy coherence. *A priori* codes included complexity,
reading-instruction logic, sensemaking, institutional work, and policy coherence. The approach
was phenomenological and focused on coding an encounter with an individual’s lived
experience. The type of information coded was individuals’ expressions in phrases and
paragraphs extracted verbatim from interviews. The *a priori* codebook appears in Appendix O.

**Testing the Reliability of the Codes**

Two interviews conducted with a principal and a first-grade teacher from a rural primary
school were excluded from the study and served as test documents. A colleague with an
education and scientific-testing background and I each used the codebook to code the two
interviews. We compared results and found them similar, suggesting the codebook is reliable.

**Using A Priori Codes**

*A priori* codes were entered into the MAXQDA qualitative and mixed methods analysis
software. Meaningful segments were highlighted and linked to codes. Codes were linked to cases
and levels of analysis and then used to retrieve segments of text, to seek patterns, and were later
grouped under themes. The *a priori* codebook guided but did not limit thematic analysis in the first deductive phase.

**Inductive Phase**

During the first deductive analysis of interview responses, I made notations as new codes emerged. The five *a priori* codes grew to include 9 additional emergent codes for the negative extreme deviant case and 3 additional emergent codes for the positive extreme deviant case. Different codes emerged for each deviant case at different levels of analysis. The type of information coded was phenomenological and included individual experiences expressed in phrases and paragraphs extracted verbatim from interviews.

**Classification of Codes into Themes**

Themes are “broad units of information that consist of several codes aggregated to form a common idea” (Creswell & Poth, 2018, p. 462). The strategies to guide theme development included “memoing to capture emerging thematic ideas,” “highlight noteworthy quotes as you code,” “create diagrams to represent relationships among codes and emerging concepts,” and “draft summary statements reflective of recurring or striking aspects of the data” (Creswell & Poth, 2018, pp. 236–237). Two distinct themes emerged and were diagramed for each of the extreme deviant cases.

**Interpretation**

The final step before data representation was interpretation, which “involves abstractions beyond the codes and themes to the larger meaning of the data” (Creswell & Poth, 2018, p. 237). Interpretations were informed by the qualitative data linked to knowledge from literature, experience with the problem in context, and the theoretical framework. Finally, graphic representations of the qualitative-data thematic analysis with illustrative quotes were developed.
Qualitative Validity Strategies

Creswell and Poth (2018) conceptualized qualitative validation as “an attempt to assess the ‘accuracy’ of the findings as best described by the researcher, the participants, and the readers” (p. 313). Qualitative researchers use multiple validation strategies from these various viewpoints to document the accuracy of their studies (Creswell, 2013; Creswell & Poth, 2018). Three qualitative validation strategies were used: triangulation from the viewpoint of the researcher, seeking participant feedback from the perspective of participants, and generating rich thick descriptions from the view of the reader.

Triangulation

The validation strategy of triangulation was used to corroborate “evidence through multiple sources” and to “shed light on a theme or perspective” (Creswell & Poth, 2018, p. 315). Qualitative evidence that informed theme development drew from interviews conducted with multiple sources, including superintendents, literacy leaders, primary school principals, kindergarten teachers, and first-grade teachers. Qualitative results were corroborated using two quantitative measures: observations, and interviews.

Seeking Participant Feedback

The validation strategy of seeking participant feedback is considered by Lincoln and Guba (1985, p. 314) to be “the most critical technique for establishing credibility.” Therefore, respondents reviewed interpretations of interview responses during the interview process. Respondents indicated that interpretations accurately reflected their descriptions of their lived experiences.
Generating rich, thick descriptions.

The validation strategy of creating rich, thick descriptions was also used. The Chapter 6 discussion includes detailed descriptions of “a day in the life” of the two cases drawn from interviews and observations.

External Perspective: Transferability

This explanatory sequential mixed methods study sought to explain a phenomenon in a specific context. Thus, external transferability is not relevant.

Mixed Methods Analysis: Integration of Two Cases

Mixed method data analysis consists of “analytic techniques applied to both the quantitative and the qualitative data as well as the integration of the two forms of data” (Creswell & Plano-Clark, 2017, p. 282). This study conducted cross-case analysis and a comparison of extreme deviant-case results facilitated by two components: integration through merging and joint displays.

Integration Through Merging

The integration of quantitative and qualitative data through merging occurs after the quantitative and qualitative phases are complete, when researchers “bring the two databases together for analysis and for comparison” (Fetters et al., 2013, p. 2141). The rationale for integration through merging in an explanatory sequential study is that the merging of qualitative results with quantitative results provides a more comprehensive, rich, thick, and elaborative explanation of the quantitative results (Fetters et al., 2013). In this study, qualitative and quantitative data was merged in joint displays to facilitate cross-case analysis and to develop insights and high-quality metainferences. A metainference is an “overall conclusion, explanation or understanding developed through an integration of the inferences obtained from the qualitative
and quantitative strands of the study” (Tashakkori & Teddlie, 2008, p. 101). Inference quality is “the accuracy with which researchers draw inductively and deductively derived conclusions from a mixed methods study, characterized by meaningful integration of quantitative and qualitative methods” (Tashakkori & Creswell, 2007, as cited by Ivankova, 2014, p. 27).

**Integration Through Joint Displays**

A joint display provides a way to “integrate the data by bringing the data together through a visual means to draw out new insights beyond the information gained from the separate quantitative and qualitative results” (Fetters et al., 2013, p. 2143). The rationale for using a joint display is that it “provides a structure to discuss the integrated analysis and assist both researchers and readers in understanding how mixed methods provide new insights” (Guetterman et al., 2015, p. 560). Two joint displays were developed to compare extreme deviant cases side by side and to support the development of metainferences. The joint displays appear in Tables 35 and 36c.

**Explanatory Sequential Design: Validity Threats and Strategies**

Researchers establish validity in mixed methods research by “employing strategies that address potential threats to drawing correct inferences and accurate assessments from the integrated data” (Creswell & Plano Clark, 2017, p. 317). Issues of validity in mixed methods research relate to the mixed method design type (Creswell & Plano Clark, 2011). In an explanatory sequential study (QUAN→qual=), typical threats to validity include selecting wrong individuals to follow-up with to explain significant results, choosing weak quantitative results to follow up qualitatively, interpreting the two sets of results in reverse order, and not adequately relating the phases or projects reciprocally in a multiphase study to each other. (Creswell & Plano Clark, 2011 restated by Ivankova, 2014, p. 29)
Ivankova (2014) suggests following a “three-step” procedure to protect the quality of meta-inferences in a QUAN→qual study.

**Selecting Participants for Qualitative Follow-Up**

One potential threat to validity in a QUAN→qual study design is selecting the wrong individuals to explain quantitative results (Creswell & Plano Clark, 2011). Researchers protect inference quality and study validity when the smaller qualitative sample consists of individuals who were involved in the quantitative phase and who can provide the most credible explanations for the quantitative results. To protect validity, the smaller qualitative sample, extreme deviant cases \( n = 2 \), were purposively selected from the larger quantitative sampling frame of all cases \( N = 16 \).

**Elaborating on Unexpected Quantitative Results**

A second potential threat to validity and inference quality is failing to explain unexpected quantitative results (Creswell & Plano Clark, 2011). In this study, all quantitative results, including unexpected results, informed interview-protocol content and were explored in qualitative interviews.

**Observing Interactions Between Qualitative and Quantitative Study Phases**

A third potential threat to validity is the failure to observe interactions between qualitative and quantitative study phases (Creswell & Plano Clark, 2011). Although QUAN→qual designs progress in a prescribed order, qualitative results may reveal the need for an additional quantitative phase to fully explain the qualitative results (Teddlie & Tashakkori, 2009). In this study, qualitative results revealed the need for an additional quantitative phase: quantitative observations. Table 9 depicts typical validity threats to a QUAN→qual= study and recommended validity strategies.
Table 9

*Explanatory Sequential Design: Validity Threats and Strategies*

<table>
<thead>
<tr>
<th>Validity threat</th>
<th>Validity strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to consider all possibilities of quantitative results to explain</td>
<td>Consider all the possibilities (e.g. significant predictors) before deciding on follow up questions and sampling</td>
</tr>
<tr>
<td>Qualitative follow up does not explain surprising, contradictory quantitative results</td>
<td>Design qualitative follow up questions to probe surprising, contradictory quantitative results</td>
</tr>
<tr>
<td>Qualitative follow up does not sample a subset of participants who completed quantitative instrument</td>
<td>Select qualitative purposive sample from the sample of qualitative participants</td>
</tr>
</tbody>
</table>


**Limitations**

Limitations associated with observations include observer bias and reactivity. Observer bias occurs when an observer’s background and viewpoints distort what they see, and as a result, they see what they expected to see. To mitigate observer bias, a colleague familiar with my background reviewed observations, notes, and coding to uncover observer bias. Further, observations investigated a limited range of behaviors, and those behaviors were precisely operationalized, also limiting observer bias.

Reactivity during observations occurs when participants being observed behave differently because of the observer’s presence. Reactivity may “decrease significantly after the researcher has been observing for a while” (B. Johnson & Turner, 2003, p. 312) and decrease after the first day of observation (Gittelsohn, Shanker, West, Ram, & Gnywali, 1997). To mitigate reactivity, a series of two observations were conducted on separate days which likely allowed participants to grow accustomed to my presence. A limitation during interviews is social desirability or the tendency for participants to provide what they see as the most socially appropriate response rather than their authentic response. To mitigate social-desirability bias, the
purpose of the interview was stated broadly and in such a way as not to relate expected responses.

Other potential limitations included time and mixed methods expertise. The explanatory mixed methods design is time consuming because it consists of two data-collection and -analysis phases and two data-integration phases. Additionally, qualitative thematic analysis involves attention to an extensive collection of data using multiple steps. I have novice-level mixed methods research skills. With consideration for time, I amended the original research plan to limit K–3 materials and teachers to kindergarten and first-grade materials and teachers. With further consideration for time, I amended the original research plan from including all 29 small rural schools in Connecticut to include the 16 small rural schools in one Connecticut county. Strategies to mitigate the limitation of expertise included attending two mixed methods workshops and a MAXQDA workshop, the use of a transcription service, MAXQDA software, and obtaining methodological, technological, and statistical assistance.

**Ethical Considerations**

In mixed methods research, researchers need to appraise ethical considerations typically associated with quantitative and qualitative studies. In this study, ethical issues included IRB approval, informed consent, participant confidentiality, and participant incentives.

**Internal Review Board Approval**

The research study adhered to all standard procedures and requirements for IRB approval, as outlined in the Johns Hopkins Homewood IRB Investigator Manual.

**Informed Consent**

Informed consent was obtained following the guidelines set forth by the American Educational Research Association Code of Ethics (2011) and included (a) a written consent
agreement that described the nature of the research and the responsibility of the researcher, (b) opportunities for participants to ask questions at any point before, during, or after participation in the research study, (c) assurance that participation was voluntary and that withdrawal from the study was permitted at any point in the study without consequence, (d) records were kept of the consent process, and (e) I honored all commitments outlined in the consent agreement.

**Participant Confidentiality**

Identifiable information was disguised using pseudonyms and numeric codes to protect the confidentiality of participants. Data was stored electronically in password-protected devices and software programs or files.

**Incentives**

Compensation was not offered for study participation. However, participating schools were informed that they might elect to receive a report describing the degree of coherence between K–3 reading-policy goals and their district’s K–3 reading curriculum and instructional practices, as well as a study abstract.

This Chapter introduced the methods used to conduct the research study. Chapter 5 reports quantitative, qualitative, and mixed methods results. Chapter 6 presents a discussion of the research findings.
Chapter 5

Results

This chapter presents results from the quantitative, qualitative, and mixed methods phases of the explanatory sequential mixed methods study. The purpose of the study was to explain differences in the degree of coherence between reading policy goals and reading instruction practices in 16 small rural schools in northwest Connecticut. The quantitative objective was to identify the degree of coherence between reading-policy guidelines to teach reading using scientifically-based reading instruction (NCLB, 2000; REA, 1998) and evidence-based curriculums (ESSA, 2015) and the reading-instruction practices implemented in small rural schools. The qualitative objective was to uncover the hidden microfoundational processes underlying variations in degrees of reading-policy coherence. The mixed methods objective was to use the qualitative results to explain the quantitative results, or how specific microfoundational processes contribute to varying degrees of reading-policy coherence.

Variables of Interest

The first quantitative phase focused on detecting evidence of scientifically-based reading instruction, evidence-based curriculums, and the essential components of reading instruction.

Evidence-Based Reading Curriculum

A curriculum is evidence-based when a peer-reviewed randomized control study, a quasiexperimental study, or a correlational study provides evidence that the curriculum has a statistically significant effect on improving student outcomes (ESSA, 2015; International Reading Association, 2004)
Scientifically-Based Reading Instruction

Scientifically-based reading instruction includes the five essential components of reading instruction identified by the NRP report (2000): phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Scientifically-based reading instruction is most effective when structured and delivered explicitly, systematically, and with varying degrees of frequency, duration, and intensity, in response to individual-child variation (Foorman & Torgesen, 2001; Spear-Swerling, 2018).

First Quantitative Phase Results

Curriculum reviews were conducted to answer the first quantitative question.

RQ1: What is the degree of coherence between reading-policy guidelines to teach reading using evidence-based curriculums and the curriculums implemented in 16 small rural school schools in Connecticut?

Curriculum-Review Results

The degree of coherence between federal reading-policy guidelines to teach reading using evidence-based reading curriculums and the reading curriculums implemented in 16 small rural schools in northwest Connecticut was evaluated using the K–2 subsection of the Rubric (Foorman et al., 2017). The Rubric is a tool used to evaluate the degree to which reading instructional materials align with rigorous reading research. To complete the Rubric, an exhaustive review was conducted of all curriculum components and associated online resources and recorded the degree to which each rubric criterion was met using a 1–5 scale (1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, and 5 = completely met). The results cover five content areas: foundational reading skills, reading comprehension for literary and informational texts, writing development and skills, speaking and listening development skills,
and language development and skills. A sample of the Rubric appears in Appendix Q. An example of the process used to complete the Rubric appears in Appendix J.

Four reading curriculums were reviewed including the *Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching* (Fountas & Pinnell, 2017), *Fundations: Wilson Language Basics for K–3* (Wilson, 2002), *Units of Study* (Calkins et al., 2015), and *Words Their Way* (Bear et al., 2015). All four reading curriculums reviewed failed to meet all Rubric criteria. One curriculum, *Words Their Way* (Bear et al., 2015), failed to meet any of the Rubric criteria. The *Fountas and Pinnell Literacy Continuum* (Fountas & Pinnell, 2017) and the *Units of Study* (Calkins et al., 2015) met the criteria for reading comprehension but failed to meet the criteria for foundational reading skills. In contrast, *Fundations* (Wilson, 2002) met the criteria related to foundational reading skills but failed to meet the criteria for reading comprehension. Comparing curriculum-review data revealed extreme deviant-case schools, those schools with the highest and lowest degree of alignment with reading-policy guidelines.

Tables 10–14 display results for each Rubric content area. A summary of the results for each content area precedes each table. Tables are organized vertically with criterion descriptions in the column to the left and corresponding results for each curriculum in the columns to the right. Cells shaded darker gray indicate that a criterion was met, and cells shaded lighter gray indicate that a criterion was not met. Averages and overall percentages of criterion met are presented at the bottom of each table.

**Descriptive Statistical Results**

**Foundational Reading Skills**

Foundational reading skills include print concepts, phonological awareness, phonemic awareness, phonics, and fluency (Foorman et al., 2016; NRP, 2000). *Fundations* (87%) met the
criteria for foundational readings skills. The *Fountas and Pinnell Literacy Continuum* (7%), the *Units of Study* (13%), and *Words Their Way* (0%) failed to meet the criteria for foundational readings skills. Table 10 displays the results for the foundational-reading-skills content area.

Table 10

**Foundational Reading Skills**

<table>
<thead>
<tr>
<th></th>
<th>Fountas &amp; Pinnell Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1.2</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>1.3</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.4</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.5</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.6</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.7</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>1.8</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.9</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.10</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>1.11</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>1.12</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>1.13</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>1.14</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1.15</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Average</td>
<td>1.93</td>
<td>4.47</td>
<td>1.60</td>
</tr>
<tr>
<td>% criteria met</td>
<td>7%</td>
<td>87%</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Note.* 1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, and 5 = completely met.

**Reading Comprehension for Literary and Informational Texts**

Reading comprehension is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (Shanahan et al., 2010, p. 117).
5). The Fountas and Pinnell Literacy Continuum (90%) and the Units of Study (90%) met the criteria for comprehension. Fundations (0%) and Words Their Way (0%) failed to meet the criteria for reading comprehension. Table 11 displays the results for the reading comprehension for literary and informational-texts content area.

Table 11

<table>
<thead>
<tr>
<th></th>
<th>Fountas &amp; Pinnell</th>
<th>Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Texts for each grade band align with complexity requirements and instructional goals.</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2.2 Materials provide texts that support frequent review of previously taught concepts and words, extended practice, and independent application of phonics skills.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2.3 Materials include a sufficient number of texts that allow students to read a variety of texts daily with and without feedback to support accuracy, fluency, and comprehension</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2.4 Materials include texts for students to learn and practice self-monitoring as they read and to self-correct reading errors when they occur.</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2.5 Texts are provided for read-alouds that are above the instructional level in complexity and guidance. These texts are used to conduct multiple read-alouds for the purpose of building vocabulary and reading comprehension with text-specific questions.</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>2.6 Materials provide a balance of texts and instructional time for literary and informational texts.</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2.7 Once students are able to read independently, materials provide additional text for regular independent reading that appeals to students’ interests to develop both knowledge and love of reading</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2.8 Texts provide opportunities for students to build knowledge through reading of specific informational and narrative text.</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2.9 Materials cultivate students’ abilities to ask and answer questions based on the text</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>2.10 Materials use scaffolding and stimulating questions to engage students in high-quality discussions</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>4.60</td>
<td>1.40</td>
<td>4.40</td>
<td>1.00</td>
</tr>
<tr>
<td>% Criteria Met</td>
<td>90%</td>
<td>0%</td>
<td>90%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Note. 1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, and 5 = completely met.

Writing Development and Skills

Effective writing instruction supports students to develop skills, including “basic language conventions, so a reader is able to interpret the text’s meaning or developing a clear focus for the reader” (Graham et al., 2012, p. 8). The Fountas and Pinnell Literacy Continuum (100%) met the criteria for writing-development skills. Fundations (33%), Units of Study (33%),
and *Words Their Way* (0%) failed to meet the criteria for writing-development skills. Table 12 displays the results for the writing-development and skills content area.

**Table 12**

*Writing Development and Skills*

<table>
<thead>
<tr>
<th>3.1 Materials include opportunities to practice writing words introduced in reading instruction and use them to write in response to what students have read.</th>
<th>Fountas &amp; Pinnell Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.2 Materials are designed with activities for students to write about what they read in both literary and informational text (for example, summaries, reactions, analysis or interpretation of text, notes, and ask/answer questions).</th>
<th>Fountas &amp; Pinnell Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.3 Materials include opportunities and prompts for students to write opinions, information/explanations, or narratives in response to texts read.</th>
<th>Fountas &amp; Pinnell Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Average**

<table>
<thead>
<tr>
<th>Fountas &amp; Pinnell Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.00</td>
<td>2.33</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**% Criteria Met**

<table>
<thead>
<tr>
<th>Fountas &amp; Pinnell Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>33%</td>
<td>33%</td>
</tr>
</tbody>
</table>

**Speaking and Listening-Development Skills**

Speaking, listening, and language-development skills include the use of “inferential (articulating ideas beyond the immediate context) and narrative language (clearly relating a series of events, both fictional and nonfictional), and vocabulary knowledge (refers to knowledge about the meanings, uses, and pronunciation of words)” (Foorman et al., 2016, p. 2). The *Fountas and Pinnell Literacy Continuum* (100%) and *Units of Study* (100%) met the criteria for speaking and listening skills. *Fundations* (0%) and *Words Their Way* (0%) failed to meet the criteria for speaking and listening skills. Table 13 displays the results for the speaking and listening-development skills content area.
Table 13

**Speaking and Listening Development Skills**

<table>
<thead>
<tr>
<th></th>
<th>Fountas &amp; Pinnell</th>
<th>Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Materials include opportunities to continue to build oral language and listening skills as students develop the ability to read independently (for example, exposure to fiction and informational text read aloud, discussions to compare/contrast, and analyze and synthesize information in response to text read aloud.</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>5.00</td>
<td>1.00</td>
<td>4.00</td>
<td>1.00</td>
</tr>
<tr>
<td>% Criteria Met</td>
<td>100%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Note.** 1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, and 5 = completely met.

**Language Development and Skills**

All four reading curriculums—*Fountas and Pinnell Literacy Continuum* (17%), *Fundations* (0%), *Units of Study* (17%), and *Words Their Way* (0%)—failed to meet the criteria for language and development skills. Table 14 displays the results for the language-development and skills content area.

Table 14

**Language Development and Skills**

<table>
<thead>
<tr>
<th></th>
<th>Fountas &amp; Pinnell</th>
<th>Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Materials include activities to engage students in conversations that support comprehension of inferential and narrative language and word knowledge using narrative and informational text.</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>5.2 Materials provide the opportunity to explicitly teach words or grammatical rules that support content that students are reading or learning.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.3 Materials provide the opportunity to teach vocabulary by making connections between a new word and other known words, by relating the word to their own experiences, by differentiating between correct and incorrect uses of the word, and by generating and answering questions that include the word.</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.4 Materials include activities for students to acquire and use grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (for example, quizzed, whined, and stammered) and that are basic to a particular topic (for example, wildlife, conservation, and endangered when discussing animal preservation).</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5.5 Materials include instruction for students to determine or clarify the meaning of unknown and multiple meaning words and phrases based on grade-appropriate reading and content, choosing flexibly from a range of strategies.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.6 Materials include instruction for students to understand word relationships and nuances in word meanings (shades of meaning).</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>1.83</td>
<td>1.00</td>
<td>1.83</td>
<td>1.00</td>
</tr>
<tr>
<td>% Criteria Met</td>
<td>17%</td>
<td>0%</td>
<td>17%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Note.** 1 = not met, 2 = partially met, 3 = adequately met, 4 = substantially met, and 5 = completely met.
Comparing average ratings over all content areas revealed that three curriculums—

*Fountas and Pinnell Literacy Continuum* (62.8%), *Fundations* (24%), and *Units of Study* (50.6%)—each aligned, to some degree, with rigorous reading research. One curriculum, *Words Their Way* (0%), failed to align with rigorous reading research. Table 15 presents a comparison of average ratings in content areas and overall.

Table 15

*Comparison of Average Ratings Within Content Areas and Overall, by Percent*

<table>
<thead>
<tr>
<th>Foundational Reading Skills</th>
<th>Fountas &amp; Pinnell</th>
<th>Fundations</th>
<th>Units of Study</th>
<th>Words Their Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0</td>
<td>87.0</td>
<td>13.0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Reading Comprehension for Literary and Informational Texts</td>
<td>90.0</td>
<td>0.0</td>
<td>90.0</td>
<td>0</td>
</tr>
<tr>
<td>Writing Development and Skills</td>
<td>100.0</td>
<td>33.0</td>
<td>33.0</td>
<td>0</td>
</tr>
<tr>
<td>Speaking and Listening Development Skills</td>
<td>100.0</td>
<td>0.0</td>
<td>100.0</td>
<td>0</td>
</tr>
<tr>
<td>Language Development and Skills</td>
<td>17.0</td>
<td>0.0</td>
<td>17.0</td>
<td>0</td>
</tr>
<tr>
<td>Overall % of Criteria Met</td>
<td>62.8</td>
<td>24.0</td>
<td>50.6</td>
<td>0</td>
</tr>
</tbody>
</table>

In reviewing the curriculums, several noteworthy distinctions emerged that are not represented by Rubric criteria. For instance, the strong overall results for the *Fountas and Pinnell Literacy Continuum* (62.8%) are misleading in several ways.

1. Scientifically-based reading instruction is most effective when delivered with varying degrees of frequency, duration, and intensity in response to individual child variation (Foorman & Torgesen, 2001; Spear-Swerling, 2018). The *Fountas and Pinnell Literacy Continuum* materials include guidance for differentiated Tier 1 instruction and do not include guidance for Tier 2 and Tier 3 instruction.

2. Effective reading instruction concurrently incorporates two interrelated sets of skills: foundational reading skills, and reading-comprehension skills (Foorman et al., 2016).
While *Fountas and Pinnell Literacy Continuum* almost completely meets the criteria for reading comprehension (90%), it almost completely fails to meet the criteria for foundational reading skills (7%).

3. Scientifically-based reading instruction is most effective when delivered explicitly (Foorman & Torgesen, 2001; Spear-Swerling, 2018). Yet, the authors of the *Fountas and Pinnell Literacy Continuum* invited literacy educators to decide whether to use an inductive/discovery approach (present examples and allow students to recognize patterns, make connections, develop a hypothesis, and generalize a hypothesis) or a deductive/explicit approach (state a principle, generate examples, guided practice with feedback, and a goal of student mastery).

4. Reading instruction is most effective when it is systematic (logically ordered from simple to complex) and cumulative (new teaching builds from previous learning; Al Otaiba et al., 2014; N. L. Cooke et al., 2009; Simmons et al., 2008, 2007; Vellutino et al., 2006). However, the authors of the *Fountas and Pinnell Literacy Continuum* stated that the continuum provides an “extensive and organized understanding of the body of knowledge that forms the foundation of expert word solving” but is not a “rigid sequence” (Fountas & Pinnell, 2003, p. 3) and further asserted that teachers should feel confident to build their own sequence (Fountas & Pinnell, 2003, p. 7). Furthermore, the authors stated that instruction is most powerful when used responsively to a teacher-identified problem, meaning that if the teacher does not detect a problem related to an element of reading instruction, then that element may not be taught.
5. Reading instruction is most effective when it includes a sufficient amount of practice decoding words in isolation and in decodable texts to practice phonic skills (Foorman et al., 2016). Famously, the authors of the *Fountas and Pinnell Literacy Continuum* created the F&P Text Level Gradient™ system, often referenced as Guided Reading Levels or F&P Levels. However, the system does not include decodable texts associated with pretaught foundational skills.

The somewhat strong overall results for the *Units of Study* (50.6) are also misleading.

1. Effective reading instruction concurrently incorporates two interrelated sets of skills: foundational reading skills, and reading comprehension skills (Foorman et al., 2016). Although *Units of Study* almost completely meets the criteria for reading comprehension (90%), it almost completely fails to meet the criteria for foundational reading skills (13%).

2. Reading researchers caution against relying on a meaning-emphasis three-cueing system to guess unknown words (e.g., Dehaene, 2009; Foorman et al., 2016, p. 34).

   Yet, Barton, coauthor of *Units of Study* stated in a promotional video,

   *To elaborate, readers use a three cueing systems, the visual, the meaning, and the structure to solve words. It is very important to remember, that in addition to the visual, we actually have to help children integrate all three cueing systems and we always want them to draw on meaning first … so as we are teaching the visual system, we want to make sure that we are teaching them how to integrate all three of those things instead of only relying on one system.* (Barton & Wears, 2019)

   Based on the overall percentage of criteria met, four small rural schools were selected for follow-up observations. Two schools selected were suspected to have higher policy coherence because they reported the use of a combination of two reading-instruction practices that together meet criteria in four of the five Rubric content areas. The second set of two schools selected were
suspected to have lower policy coherence because they reported the use of a combination of reading-instruction practices that together meet criteria in two of five Rubric content areas.

The two schools suspected to have higher coherence (Schools A and B) reported they use either *Fountas & Pinnell* (62.8%) or *Units of Study* (50.6%) and an Orton Gillingham approach to reading instruction. Orton Gillingham is not a curriculum and, therefore, it was not evaluated in the curriculum review. The Orton Gillingham approach is a “systematic, sequential, multisensory, synthetic, and phonics-based approach to teaching reading. Explicit instruction is provided in phonology and phonological awareness, sound-symbol correspondence, syllables, morphology, syntax, and semantics” (Ritchey & Goeke, 2006, p. 171). The combinations of *Fountas & Pinnell* (62.8%) or *Units of Study* (50.6%) and an Orton Gillingham approach meet the criteria for four content areas, foundational reading skills, reading comprehension, writing development and skills, and language development and skills, but failed to meet criteria for one content area: speaking and listening-development skills.

One low-coherence school (School C) reported use of the *Units of Study* (50.6%) and *Words Their Way* (0%). This combination of curriculums meets criteria for two content areas—reading comprehension and speaking and listening-development skills—but fails to meet criteria for three content areas: foundational reading skills, writing development and skills, and language development and skills. The second low-coherence school (School D) reported they use *Units of Study* (50.6%) and *Fundations* in kindergarten (24%) but *Units of Study* alone in first grade (50.6%). The curriculum combination School D uses in kindergarten meets the criteria for four content areas—foundational reading skills, reading comprehension, writing development and skills, and language development and skills—but fails to meet criteria for one content area, speaking and listening development skills. However, the curriculum combination that School D
uses in first grade only meets criteria for two content areas—reading comprehension and speaking and listening-development skills—and fails to meet criteria for three content areas: foundational reading skills, writing development and skills, and language development and skills. Table 16 displays a comparison of criteria met in the deviant-case schools.

Table 16

_Schools Suspected to Have Higher Coherence and Lower Coherence Between Reading Policy and Reading-Instruction Practices_

<table>
<thead>
<tr>
<th>School A</th>
<th>School B</th>
<th>School C</th>
<th>School D</th>
</tr>
</thead>
<tbody>
<tr>
<td>School suspected to have high policy coherence</td>
<td>School suspected to have high policy coherence</td>
<td>School suspected to have low policy coherence</td>
<td>School suspected to have low policy coherence</td>
</tr>
<tr>
<td>Fountas &amp; Pinnell (62.8%) and Orton Gillingham</td>
<td>Units of Study (50.6%) and Orton Gillingham</td>
<td>Units of Study (50.6%) and Words Their Way (0%)</td>
<td>Units of Study (50.6%) and Fundations (24%) in Kindergarten and Units of Study in first grade (50.6%)</td>
</tr>
</tbody>
</table>

**Observations**

Observations were conducted to answer the second quantitative research question.

RQ2: What is the degree of coherence between reading-policy guidelines to teach reading using scientifically-based reading instruction and reading-instruction practices institutionalized in 16 small rural schools in Connecticut?

To evaluate the degree of coherence between reading-policy guidelines and reading-instruction practices, two separate 90- to 120-minute observations were conducted of classroom reading instruction in kindergarten and first-grade classrooms in the four deviant case schools. Observations were coded using the concepts of print, phonemic awareness, phonics, fluency, and vocabulary subsections of the PRWT (Tanner-Smith et al., 2009). To complete the PRWT
Checklist, the degree to which each checklist item was evident was coded using a 1–3 scale (1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine).

Tables 17–27 each display results for one PRWT Checklist subsection. Tables are organized vertically with criterion descriptions in the column to the left and corresponding results for each deviant case school in the columns to the right. Results appear as 1 (to indicate observed) and −1 (to indicate not observed). Table cells shaded darker gray indicate that the criteria was observed and cells shaded lighter gray indicate that the criteria was not observed. Overall percentages of criteria met appear at the bottom of each table. A summary of subsection results precedes tables.

Descriptive Statistical Results

Kindergarten Concepts of Print

Concepts of print is “an awareness of how books and print are organized” (Tanner-Smith et al., 2009, p. 15). Kindergarten reading instruction in the high-coherence school (100%) completely met the criteria for adequate concepts of print instruction. Kindergarten reading instruction in the low policy-coherence school (33%) partially met the criteria for adequate concepts of print instruction. Table 17 details the concepts of print subsection results.

Kindergarten Phonemic Awareness

Phonemic awareness is the ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words (Torgesen, 1998). Kindergarten reading instruction in the high-coherence school partially (67%) met the criteria for adequate phonemic-awareness instruction. Kindergarten reading instruction in the low-coherence school (0%) failed to meet the criteria of adequate phonemic-awareness instruction. Table 18 details the phonemic-awareness subsection results.
Table 17

**Kindergarten Concepts of Print**

<table>
<thead>
<tr>
<th>10a. Teacher identifies parts of a book (e.g., front, back, title page), print on (e.g., top to bottom, left to right), a page and how it is organized</th>
<th>1</th>
<th>1</th>
<th>1</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>10b. Teacher demonstrates how print matches speech and written words are separated by spaces.</td>
<td>1</td>
<td>1</td>
<td>−1</td>
<td>−1</td>
</tr>
<tr>
<td>10c. Teacher explains simple punctuation rules (e.g., first-letter capitalization, ending punctuation).</td>
<td>1</td>
<td>1</td>
<td>−1</td>
<td>−1</td>
</tr>
<tr>
<td>% Criteria Met</td>
<td>100%</td>
<td>100%</td>
<td>33%</td>
<td>33%</td>
</tr>
</tbody>
</table>

*Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.*

Table 18

**Kindergarten Phonemic Awareness**

| 11a. Teacher uses oral activities that include rhyming, word play, and manipulation of words, syllables, and sounds. | −1 | −1 | −1 | −1 |
| 11b. Teacher uses engaging activities and materials to support instruction (e.g., hand motions, clapping, puppets, Elkonin boxes, other manipulatives to represent sounds). | 1 | 1 | −1 | −1 |
| 11c. Teacher clearly and accurately pronounces individual sounds that are the focus of the lesson with enough volume for students to hear. | 1 | 1 | −1 | −1 |
| % Criteria Met | 67% | 67% | 0% | 0% |

*Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.*

**Kindergarten Phonics**

Phonics instruction involves explicitly teaching students letter–sound relationships and having students read text that provides practice using letter–sound relationships to decode words (NRP, 2000). Kindergarten reading instruction in the high-coherence school partially (50%) met the criteria for adequate phonics instruction. Kindergarten reading instruction in the low-coherence school (0%) failed to meet the criteria for adequate phonics instruction. Table 19 details the phonics-subsection results.
Table 19

**Kindergarten Phonics**

<table>
<thead>
<tr>
<th>Kindergarten Phonics</th>
<th>High policy coherence</th>
<th>High policy coherence</th>
<th>Low policy coherence</th>
<th>Low policy coherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Day 2</td>
<td>Day 1</td>
<td>Day 2</td>
<td></td>
</tr>
<tr>
<td>12a. Teacher uses manipulatives, such as letter tiles and Elkonin boxes, to help make the connection between phonemes (sounds) and graphemes (letters).</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>12b. Teacher uses visual aids (e.g., alphabet cards, letter-sound cards, word cards) as designed by the program.</td>
<td>1</td>
<td>1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>12c. Teacher introduces an explicit decoding strategy to sound and blend simple words.</td>
<td>1</td>
<td>1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>12d. Teacher introduces and reviews common irregular words (e.g., was, to, the) frequently.</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
</tbody>
</table>

% Criteria Met

| 50% | 50% | 0% | 0% |

*Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.*

**Kindergarten Fluency**

Reading fluency is the “ability to read text quickly, accurately, and with appropriate expression” (Tanner-Smith et al., 2009, p. 40). Kindergarten reading instruction in the high-coherence school (0%) failed to meet the criteria for adequate fluency instruction. Kindergarten reading instruction in the low-coherence school (33%) partially met the criteria for adequate fluency instruction. Table 20 details the fluency-subsection results.

Table 20

**Kindergarten Fluency**

<table>
<thead>
<tr>
<th>Kindergarten Fluency</th>
<th>High policy coherence</th>
<th>High policy coherence</th>
<th>Low policy coherence</th>
<th>Low policy coherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Day 2</td>
<td>Day 1</td>
<td>Day 2</td>
<td></td>
</tr>
<tr>
<td>13a. Teacher models fluent reading (i.e., speed, accuracy, and prosody) during read-aloud and shared reading activities.</td>
<td>-1</td>
<td>-1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>13b. Teacher and students are academically engaged in shared reading activities (e.g., big books, choral reading, charts, poems, songs).</td>
<td>-1</td>
<td>-1</td>
<td>1</td>
<td>-1</td>
</tr>
<tr>
<td>13c. Pre-reading activities (e.g., letter naming, letter sound, shared reading, pre-decodable and decodable books) are taking place in small groups with the teacher providing immediate scaffolded feedback.</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
</tbody>
</table>

% Criteria Met

| 0% | 0% | 67% | 33% |

*Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.*
Kindergarten Vocabulary

Adequate vocabulary instruction includes eight to 10 new words explicitly taught each week, or 400 new words per year (Stahl & Fairbanks, 1986). Effective teachers select vocabulary words that are unknown to students, commonly encountered in texts, and critical to understanding (Tanner-Smith et al., 2009, p. 23). Kindergarten reading instruction in the high-coherence school (20%) partially met the criteria for adequate vocabulary instruction.

Kindergarten reading instruction in the low-coherence school (10%) partially met the criteria for adequate vocabulary instruction. Table 21 details the vocabulary-subsection results.

Table 21

<table>
<thead>
<tr>
<th>Kindergarten Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
</tr>
</tbody>
</table>

| 14a. Teacher contextualizes unfamiliar words in stories read orally to students by using student-friendly explanations. | 1 | 1 | 1 | -1 |
| 14b. Explicit vocabulary instruction is purposeful and ongoing as evidenced by teacher providing lists of vocabulary words, word walls, concrete examples, and other resources to determine the meanings of words. | -1 | -1 | -1 | -1 |
| 14c. Teacher categorizes key vocabulary and identifies important features. | -1 | -1 | -1 | -1 |
| 14d. Teacher relates new vocabulary to prior knowledge through questioning and other instructional activities. | -1 | -1 | -1 | -1 |
| 14e. Students are actively involved with thinking about and using words in multiple contexts. | -1 | -1 | -1 | -1 |

% Criteria Met 20% 20% 20% 0%

Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

Kindergarten Comprehension

Reading comprehension is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (Shanahan et al., 2010, p. 5). Kindergarten reading instruction in the high-coherence school (75%) partially met the criteria for adequate comprehension instruction. Kindergarten reading instruction in the low-coherence...
school (50%) also partially met the criteria for adequate comprehension instruction. Table 22 details the comprehension-subsection results.

Table 22

**Kindergarten Comprehension**

<table>
<thead>
<tr>
<th>% Criteria Met</th>
<th>High policy</th>
<th>High policy</th>
<th>Low policy</th>
<th>Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kindergarten</td>
<td>Kindergarten</td>
<td>Kindergarten</td>
<td>Kindergarten</td>
</tr>
<tr>
<td>Day 1</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Day 2</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
</tr>
</tbody>
</table>

15a. Teacher models and encourages students to make predictions about text content using pictures, background knowledge, and text features (e.g., title, subheading, captions, illustrations).

15b. Teacher models and encourages students to use prior knowledge and supporting details from text to make connections with the reading selection.

15c. Teacher models and encourages students to retell the main idea, identify supporting details (e.g., who, what, when, where, why, how), and arrange events in sequence.

15d. Teacher models and encourages students to determine whether a reading selection is fact or fiction and to identify the author’s purpose.

Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

**Principal’s Reading Walkthrough: First Grade**

**First-Grade Phonemic Awareness**

Phonemic awareness is the ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words (Torgesen, 1998). First-grade reading instruction in the high-coherence school (100%) completely met the criteria for adequate phonemic-awareness instruction. First-grade reading instruction in the low-coherence school (0%) failed to meet the criteria for adequate phonemic-awareness instruction. Table 23 details the phonemic-awareness-subsection results.

**First-Grade Phonics**

Phonics instruction involves explicitly teaching students letter–sound relationships and having students read text that provides practice using letter–sound relationships to decode words (NRP, 2000). First-grade reading instruction in the high-coherence school (80%) partially met
the criteria for adequate phonics instruction. First-grade reading instruction in the low-coherence school (0%) failed to meet the criteria for adequate phonics instruction. Table 24 details the phonics-subsection results.

Table 23

*First Grade Phonemic Awareness*

<table>
<thead>
<tr>
<th>10a. Teacher uses oral activities that include segmenting, blending, and manipulation of sounds in words.</th>
<th>↓ High policy ↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>–1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10b. Teacher uses engaging activities and materials to support instruction (e.g., hand motions, clapping, puppets, Elkonin boxes, other manipulatives to represent sounds).</th>
<th>↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>–1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10c. Teacher clearly and accurately pronounces individual sounds that are the focus of the lesson with enough volume for students to hear.</th>
<th>↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>–1</td>
</tr>
</tbody>
</table>

% Criteria Met 100% 100% 0% 0%

*Note.* 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

Table 24

*First Grade Phonics*

<table>
<thead>
<tr>
<th>11a. Teacher uses manipulatives, such as letter tiles and Elkonin boxes, to help make the connection between phonemes (sounds) and graphemes (letters).</th>
<th>↑ High policy ↑ High policy ↓ Low policy ↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>–1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11b. Teacher uses visual aids (e.g., alphabet cards, letter-sound cards, word cards) as designed by the program.</th>
<th>↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>–1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11c. Teacher introduces an explicit decoding strategy to sound and blend simple words.</th>
<th>↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–1</td>
<td>–1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11d. Teacher introduces and reviews common irregular words (e.g., there, because) frequently.</th>
<th>↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–1</td>
<td>–1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11e. Students are applying letter/sound knowledge in reading and writing activities.</th>
<th>↓ Low policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–1</td>
<td>–1</td>
</tr>
</tbody>
</table>

% Criteria Met 60% 100% 0% 0%

*Note.* 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

**First-Grade Fluency**

Reading fluency is the “ability to read text quickly, accurately, and with appropriate expression” (Tanner-Smith et al., 2009, p. 40). First-grade reading instruction in the high-
coherence school (87.5%) partially met the criteria for adequate fluency instruction. First-grade reading instruction in the low-coherence school (100%) completely met the criteria for adequate fluency instruction. Table 25 details the fluency-subsection results.

Table 25

First Grade Fluency

<table>
<thead>
<tr>
<th>12a. Teacher models fluent reading (i.e., speed, accuracy, and prosody) during read-aloud and shared readings.</th>
<th>↑ High policy coherence First Grade Day 1</th>
<th>↑ High policy coherence First Grade Day 2</th>
<th>↓ Low policy coherence First Grade Day 1</th>
<th>↓ Low policy coherence First Grade Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>12b. Teacher and students are academically engaged in shared reading activities (e.g., big books, choral reading, charts, poems, songs).</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>12c. Oral reading takes place in whole and small groups; the teacher provides immediate scaffolded feedback.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>12d. Students are reading orally (e.g., choral reading, partner reading, repeated reading).</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

% Criteria Met

| 100% | 75% | 100% | 100% |

Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

First-Grade Vocabulary

Adequate vocabulary instruction includes eight to 10 new words explicitly taught each week, or 400 new words per year (Stahl & Fairbanks, 1986). Effective teachers select vocabulary words that are unknown to students, commonly encountered, and critical to understanding (Tanner-Smith et al., 2009, p. 23). First-grade reading instruction in the high-coherence school (20%) partially met the criteria for adequate vocabulary instruction. First-grade reading instruction in the low-coherence school (30%) also partially met the criteria for adequate vocabulary instruction. Table 26 details vocabulary-subsection results.
Table 26

First Grade Vocabulary

<table>
<thead>
<tr>
<th></th>
<th>↑ High policy coherence First Grade Day 1</th>
<th>↑ High policy coherence First Grade Day 2</th>
<th>↓ Low policy coherence First Grade Day 1</th>
<th>↓ Low policy coherence First Grade Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>13a. Teacher contextualizes unfamiliar words in stories read orally to students by using student-friendly explanations.</td>
<td>1</td>
<td>–1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>13b. Explicit vocabulary instruction is purposeful and ongoing as evidenced by lists of vocabulary words, graphic organizers, word walls, word sorts, etc.</td>
<td>–1</td>
<td>–1</td>
<td>–1</td>
<td>–1</td>
</tr>
<tr>
<td>13c. Teacher categorizes key vocabulary and identifies important features.</td>
<td>–1</td>
<td>–1</td>
<td>–1</td>
<td>–1</td>
</tr>
<tr>
<td>13d. Teacher relates new vocabulary to prior knowledge through questioning and other instructional activities.</td>
<td>1</td>
<td>–1</td>
<td>1</td>
<td>–1</td>
</tr>
<tr>
<td>13e. Students are actively involved with thinking about and using words in multiple contexts.</td>
<td>–1</td>
<td>–1</td>
<td>–1</td>
<td>–1</td>
</tr>
<tr>
<td>% Criteria Met</td>
<td>40%</td>
<td>0%</td>
<td>40%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

First-Grade Comprehension

Reading comprehension is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (Shanahan et al., 2010, p. 5). First-grade reading instruction in the high-coherence school (100%) met the criteria for adequate comprehension instruction. First-grade reading instruction in the low-coherence school (82%) also partially met the criteria for adequate comprehension instruction. Table 27 details comprehension-subsection results.

Tables 28 (kindergarten) and 29 (first grade) compare average ratings in PRWT subsections and overall. Results from the first quantitative phase informed the purposive selection of the smaller qualitative sample from the larger quantitative sample frame. The differences in coherence between reading policy and reading-instruction practices that first emerged from the curriculum review emerged more distinctly during observations. Observations confirmed School A as the positive extreme deviant case, or the school with the highest degree of reading-policy coherence and School C as the negative extreme deviant case, or the school
with the lowest degree of reading-policy coherence. Table 30 compares quantitative outcomes across the two extreme deviant case schools.

Table 27

First Grade Comprehension

<table>
<thead>
<tr>
<th>Activity</th>
<th>High policy coherence</th>
<th>Low policy coherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>14a. Teacher models and encourages students to make predictions about</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>text content using pictures, background knowledge, and text features</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(e.g., title, subheading, captions, illustrations).</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14b. Teacher models and encourages students to use prior knowledge and</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>supporting details from text to make connections with the reading</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>selection.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14c. Teacher models and encourages students to retell the main idea,</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>identify supporting details (e.g., who, what, when, where, why, how),</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>and arrange events in sequence.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14d. Teacher models and encourages students to use prior knowledge and</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>supporting details from text to determine whether a reading selection is</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fact or fiction and to identify the author’s purpose.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14e. Teacher models and encourages students to use graphic and semantic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizers to help students focus on text structures and to examine</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>relationships in text.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14f. Teacher models and encourages students to self-monitor comprehension</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>and use appropriate fix-up strategies (e.g., rereading, summarizing,</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>questioning and clarifying, context clues).</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14g. Students identify, ask, and answer questions about story grammar</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>(e.g., characters, setting, problems, solutions).</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14h. Students and teacher are discussing answers to higher-level</td>
<td>First Grade Day 1</td>
<td>First Grade Day 2</td>
</tr>
<tr>
<td>questions (e.g., inferential, analytical) about shared readings and</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>selections read.</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

% Criteria Met

100% 100% 75% 88%

Note. 1 = yes to indicate observed, 2 = no to indicate not observed, and 3 = unable to determine.

Table 28

Kindergarten Reading Principal Reading Walkthrough Averages Overall

<table>
<thead>
<tr>
<th>Kindergarten Concepts of Print</th>
<th>Average of Day 1 and Day 2 high-policy coherence school</th>
<th>Average of Day 1 and Day 2 low-policy coherence school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten Phonological/</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten Phonics</td>
<td>67</td>
<td>0</td>
</tr>
<tr>
<td>Kindergarten Fluency</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Kindergarten Vocabulary</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>Kindergarten Comprehension</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Average overall</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>Average overall</td>
<td>52</td>
<td>24</td>
</tr>
</tbody>
</table>
Table 29

*First Grade Reading Principal Reading Walkthrough Averages Overall*

<table>
<thead>
<tr>
<th></th>
<th>Average of Day 1 and Day 2 high-policy coherence school</th>
<th>Average of Day 1 and Day 2 low-policy coherence school</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Grade Phonological/Phonemic Awareness</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>First Grade Phonics</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>First Grade Fluency</td>
<td>88</td>
<td>100</td>
</tr>
<tr>
<td>First Grade Vocabulary</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>First Grade Comprehension</td>
<td>100</td>
<td>82</td>
</tr>
<tr>
<td>Average overall</td>
<td>77.6</td>
<td>42.4</td>
</tr>
</tbody>
</table>

Table 30

*Comparing Quantitative Outcomes Across the Two Extreme Deviant Case Schools*

<table>
<thead>
<tr>
<th></th>
<th>School A higher policy coherence</th>
<th>School C lower policy coherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Coherence</td>
<td><em>Fountas &amp; Pinnell (62.8%)</em> and</td>
<td><em>Units of Study (50.6%)</em> and</td>
</tr>
<tr>
<td></td>
<td>Orton Gillingham</td>
<td><em>Words Their Way (0%)</em></td>
</tr>
<tr>
<td>Instructional Coherence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindergarten overall</td>
<td>52%</td>
<td>24%</td>
</tr>
<tr>
<td>First grade overall</td>
<td>77.6%</td>
<td>42.4%</td>
</tr>
<tr>
<td>Average overall</td>
<td>64.8%</td>
<td>33.2%</td>
</tr>
</tbody>
</table>

**Second Qualitative-Phase Results**

Interviews were conducted with one superintendent, principal, literacy leader, first-grade teacher, and kindergarten teacher from each of the deviant-case schools. Interviews explored the phenomenon of interest: the microfoundational processes hidden in reading-instruction cultures between the structural input of reading policy, and the cultural output of various degrees of reading-policy coherence. Three research questions guided the qualitative study.
Central Qualitative Questions

RQ3: How do district leaders, principals, literacy leaders, and teachers explain variations in coherence between reading-policy guidelines and reading-instruction practices?

Qualitative Subquestions

RQ4: How do district leaders, principals, literacy leaders, and teachers describe reading-instruction practice in context?

RQ5: How do district leaders, principals, literacy leaders, and K–1 teachers disclose where complexity (conflicting logics) is located?

Interview transcripts were analyzed using a lean-coding approach (Creswell & Poth, 2018) organized into three phases: an initial deductive phase facilitated by an a priori codebook, a subsequent inductive phase following emergent codes, and finally, the organization of codes into themes. Two datasets were analyzed separately. The first dataset emerged from negative extreme deviant-case interviews, and the second dataset emerged from positive extreme deviant-case interviews.

First Deductive Phase

Thematic analysis began deductively using an a priori codebook. The theoretical framework informed code development, and code names reflect the method of analysis, tracing the microfoundational processes between the structural input of reading policy and the cultural output of variation in degrees of reading-policy coherence. A priori codes included complexity, reading-instruction logic, sensemaking, institutional work, and policy coherence. The approach to coding was phenomenological, focused on depicting individuals’ lived experiences. Accordingly, coded information included respondents’ expressions in phrases and paragraphs extracted verbatim from interviews. The a priori codebook appears in Appendix O.
Table 31 presents the completed *a priori* codebook for the negative extreme deviant-case interviews. Table 32 presents the completed *a priori* codebook for the positive extreme deviant-case interviews. Each table includes the code name, definition, and illustrative verbatim quotations for each level of analysis: superintendent, principal, literacy leader, and teachers. A summary of the results follows each table.

Table 31

**Negative Extreme Deviant Case Thematic Analysis Using the A Priori Codebook**

<table>
<thead>
<tr>
<th>Code definition</th>
<th>Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Instruction Logic</td>
<td>Superintendent: “It’s not just that there’s a difference between one school and another, even in each of the schools, things aren’t being done the same way. You can walk into one classroom, and one program is being used with emphasis, and something different [is used] in another. No alignment whatsoever.” Principal: “I feel very good about the reading curriculum that we have at this school, we use the <em>Columbia Teachers Writing College Curriculum.</em>” Literacy Leader: “But regarding their classroom instruction, I think every teacher teaches it differently. Some use a workshop model, some use guided reading instruction, and I just kind of, when I’m supporting in the classrooms, kind of learn and do what works best for them [teachers].” First grade teacher: “You know basically in this school, we don’t have a program, in K–2, we use the <em>Columbia reading and writing model,</em> and then in third grade they use the <em>Engage New York ELA modules.</em>” Kindergarten teacher: “Within our school we design our reading curriculum. And here we teach Reading Workshop … and that’s our primary vehicle for teaching of reading.”</td>
</tr>
<tr>
<td>Logics are the “socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton &amp; Ocasio, 2008, p. 101). Institutional logics act as frames of reference that shape agent cognition (e.g., organizational sensemaking) and mobilize agent action (e.g., institutional work; Thornton et al., 2015). Complexity Complexity is the interaction of “incompatible prescriptions from multiple institutional logics” (Greenwood et al., 2011, p. 317).</td>
<td>Superintendent: “I started realizing the policies in our all of our K–8 schools were dating back 20–25 years and they might be revised, but they weren’t they weren’t congruent. They were incongruent with law.” Principal: “They [superintendent and assistant superintendent] want every individual school to be using the same thing but they can’t enforce it, because every school in the region is its own school district.” Literacy Leader: (in describing her role supporting reading instruction) “It’s hard to communicate when you’re feeling differently.” First grade teacher: “Our superintendent is driving the car and she is a taskmaster. I love what she’s trying to do for us, like she realizes that we are behind the eight ball in this region. But she wants it done yesterday and the amount that she’s asking of teachers … I work all the time.” Kindergarten teacher: “I happen to like the rules of the phonics and I think that might be something that we could incorporate more. This is how I know my co-teacher and I disagree. I really like Fundations and things like that. She really … doesn’t care for it. She feels like it’s very boring and it’s an intervention.”</td>
</tr>
</tbody>
</table>
Institutional work is the “practices of individual and collective actors aimed at creating, maintaining, and disrupting institutions” (Lawrence et al., 2011, p. 53).

Superintendent: “Well, if I have a question about it I usually call our school attorney. But generally, I can, if here’s enough of an explanation that accompanies the policy, that I can determine it on my own.”

Principal: “So formal meetings … in my case … I would pull my K–2 team or my K–4 team actually and pull them together and we would have a meeting after school and sit down and take a look at what the expectations were going to be [and] look at where we were on that continuum … is what we’re doing and action, and thereby enacting a more ordered environment from which furthercompliance?”

Kindergarten teacher: “I work with a veteran teacher. We co-teach together. We both have, although we have very similar ideas in many, many ways, we also have a little bit of a different … she’s a very naturally a English language arts learner. I’m a very math analytical learner. So we come at it a little bit differently. You know, that’s our natural tendency. So because of that, I really pushed a little heavier on the phonics side of it. She pushed us a little bit more on the process side of it, um, but because of it, I think we also can meld well together and we can teach a combination of it, which I think really benefits our students here.”

Superintendent: [describing mobilized resources to support compliance with a policy mandate] “I found out that no one was doing grade-level team meetings … so … I said that you need to do the grade-level team meetings, we’ll find the time [using] floating subs. And so I brought this up two months ago to our K–8 principals and I said next year everybody’s doing grade-level team meetings, and they looked at me in horror.”

Principal: “At this point, I have no intentions of changing that [current reading instruction practices]. I’ve been under a lot of fire to change it over to this thing, or that thing, or whatever in the past year and a half … this is not broken.”

“… I sort of fail to see the necessity to completely rip the thing out of the ground by the roots right and change it.”

Literacy Leader: [I asked the literacy leader if I could restate what she had just said]

Me: “So then you take a supportive role and … basically you’re taking the lead from the teacher.”

Literacy leader: “Yes!”

Me: “So you don’t go in and superimpose another view.”

First grade teacher: “There are people though that are more current in reading than I am, you know, because I mean I have a different wealth of knowledge, but my training is back in 1970, 1980, so I just think it’s the reading people are making a lot of the decisions. And they have, they’re the experts and they have the assistant superintendent’s ear and they’re making decisions for us.”

“So, my colleague just started, she’s only a second year teacher. And she has huge holes. Huge, huge holes in her understanding. She’s learned a lot from me, but boy, we have a trajectory there, between you and me.”

K-8 Leader: [using informal talk, probably more informal talk than formal] “So I want to really get the feel in house, to find out how is this going to impact us, what do we need to do, and then check up the food chain to find out if we can do that [adapt policy to protect existing practices]. And then if we can’t, then we fall back when we meet again, and we’ll go to a B plan and maybe it’s about compromise, I found it usually works to be the best, overall.”

Literacy Leader: “So I talk to colleagues outside of my school that are in the region. And I think I also just learn from again doing the job, from the students I’m working with, you know, from professional reading and professional responsibilities, professional development, and so forth.”

First grade teacher: “So I don’t know if I do really interpret [policy]. Well, I don’t think, there really aren’t any [policy guidelines to be interpreted].”

Literacy Leader: “So I talk to colleagues outside of my school that are in the region. And I think I also just learn from again doing the job, from the students I’m working with, you know, from professional reading and professional responsibilities, professional development, and so forth.”

First grade teacher: “So I don’t know if I do really interpret [policy]. Well, I don’t think, there really aren’t any [policy guidelines to be interpreted].”

Kindergarten teacher: “We receive the text format of it [policy] and we sit down and … we read through it. We decide what it means, there’s a lot of kind of formal breakdown with, you know, like grade level meetings we talked about, like, what is this, what’s the expectation here what do we expect it to be able to provide here. But then I think that there’s also a lot of just Informal talk about like, well, what does this look like, what does this look like in the past, and how does this need to change … how are we going to adjust that for our for our purposes, how does the guideline change. So yeah, I think it’s a lot of informal talk, probably more informal talk than formal.”

Literacy Leader: “So I talk to colleagues outside of my school that are in the region. And I think I also just learn from again doing the job, from the students I’m working with, you know, from professional reading and professional responsibilities, professional development, and so forth.”

First grade teacher: “So I don’t know if I do really interpret [policy]. Well, I don’t think, there really aren’t any [policy guidelines to be interpreted].”

Superintendent: “Well, if I have a question about it I usually call our school attorney. But generally, I can, if here’s enough of an explanation that accompanies the policy, that I can determine it on my own.”

Principal: “So formal meetings … in my case … I would pull my K–2 team or my K–4 team actually and pull them together and we would have a meeting after school and sit down and take a look at what the expectations were going to be [and] look at where we were on that continuum … is what we’re doing and action, and thereby enacting a more ordered environment from which furthercompliance?”

Superintendent: “Well, if I have a question about it I usually call our school attorney. But generally, I can, if here’s enough of an explanation that accompanies the policy, that I can determine it on my own.”

Principal: “So formal meetings … in my case … I would pull my K–2 team or my K–4 team actually and pull them together and we would have a meeting after school and sit down and take a look at what the expectations were going to be [and] look at where we were on that continuum … is what we’re doing and action, and thereby enacting a more ordered environment from which furthercompliance?”

Sensemaking is a process “prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation[with] that? Is there anything that we have to do to our program to shift in any way? And if so, what are the pros and cons of that? What do we feel would be the best fit for our students to still stay in our natural tendency. So because of that, I really pushed a little heavier on the phonics side of it. She pushed us a little bit more on the process side of it, um, but because of it, I think we also can meld well together and we can teach a combination of it, which I think really benefits our students here.”
Policy Coherence

Policy coherence is achieved if the cognition and action of all individuals and groups at all systems levels align with policy goals (Honig & Hatch, 2004).

Superintendent: “It’s not just that there’s a difference between one school and another, even in each of the schools, things aren’t being done the same way. You can walk into one classroom, and one program is being used with emphasis, and something different [is used] in another. No alignment whatsoever.”

Principal: “They want every individual school to be using the same thing but they can’t enforce it, because every school in the region is its own school district. I had a conversation, years and years ago, whenever I started teaching here, and the principal said it’s a beautiful thing because she said you can pull your district card. She said, when you feel you need to pull up the drawbridge. You can do it. And so there’s been a lot of that going on here the last few years.”

Literacy Leader: “But regarding their classroom instruction. I think every teacher teaches it differently. Some use workshop model, some use guided reading instruction, and I just kind of, when I’m supporting in the classrooms, kind of learn and do what works best for them.”

First grade teacher: “Well, we’re all adhering to the guidelines of the testing three times a year.”

Kindergarten teacher: “So I think we all have the same philosophy in that we hold the same end goal. It’s the process, that’s where I think it breaks down a little bit. We all have a little bit of a different process to achieve that goal. So I would say that that is something that we’re still working on.”

Summary of Negative Extreme Deviant-Case A Priori Codebook Results

Reading-Instruction Logic

The district superintendent observed that “no alignment whatsoever” exists among reading-instruction logics in the negative-case school. Yet, the principal represented reading instruction as historically aligned with a single logic: the Units of Study (Calkins & Teachers College Reading and Writing Project, 2015). Misaligned with the principal’s framing, however, the literacy leader and kindergarten and first-grade teachers revealed that reading-instruction logics vary among teachers and across classrooms and grades. Various reading-instruction logics include a meaning-emphasis approach provided to all kindergarten through second-grade students, a code-emphasis approach reserved as an intervention provided to a small number of struggling students who failed to acquire meaning-emphasis skill by the end of second grade, basal readers, guided reading, and balanced instruction featuring a mix of meaning- and code-emphasis instruction.

Complexity

Complexity emerged at all systems levels in the negative-case reading-instruction culture. The superintendent’s imposed logic of more effective reading instruction clashed with board of
education, principal, and teacher assertions that the prevailing reading-instruction logic is already effective. Complexity also emerged between the meaning-emphasis reading-instruction logic of a more veteran K–2 reading teacher and attempts of a more recently trained K–2 coteacher to incorporate code-emphasis instruction. The undisrupted K–2 meaning-emphasis reading-instruction logic also conflicted with the third-grade balanced-reading-instruction logic. Finally, complexity emerged in the literacy leader’s struggle to support K–5 teachers and students in classrooms featuring various reading-instruction logics.

Sensemaking

Various sensemaking accounts emerged at multiple systems levels. The principal and a veteran teacher publicly and freely shared accounts of a cohesive school community, the efficacy of existing reading-instruction practices, dedication to children and families over bureaucratic goals, and a commitment to engage in acts of resistance to maintain local control and identity. The principal and teachers selectively shared theories of student deficits to excuse reading failure (poverty, low I.Q., inadequate development, young chronological age, gender, adverse early experience, and uninvolved families). The principal, literacy leader, and teachers recounted a history of economic hardship. The principal and a veteran teacher expressed concerns regarding central-office leader qualifications, intent, expertise, and perceived disregard for the uniqueness of small rural schools. Finally, the principal framed third-grade reading failure as an issue arising from an “excellent teacher” overwhelmed by a combined third- and fourth-grade class.

Institutional Work

The superintendent engaged in institutional work to disrupt and transform reading-instruction logics including political work to redefine rules (imposing the logic of effective reading instruction, early literacy groups, and grade-level meetings), and increasing access to
resources (advanced training with experts and grant funds dedicated to floating teachers). The principal, literacy leader, and teachers engaged in two types of work to maintain institutionalized reading-instruction practices, adherence to rules and systems, and reproduction of existing norms and beliefs. The school board and the principal engaged in institutional work to protect the school from the superintendent’s reform efforts, including disassociating the practices of the imposed logic from their moral foundations (virtue and necessity) by undermining the core assumptions and beliefs of the imposed logic. To date, the institutional work of the board, principal, and educators maintains the status quo, and reading-instruction logics remain undisturbed and untransformed.

**Policy Coherence**

In the negative-case reading-instruction culture, cognition and action in and across systems levels failed to align with each other or with reading-policy goals. The school board, principal, and a veteran teacher mediated between externally imposed reading policy and locally institutionalized reading-instruction practices to protect local control and to resist efforts to achieve policy coherence.

**Positive Extreme Deviant Case Deductive Results**

Table 32 presents results from the first deductive phase of thematic analysis for the positive extreme deviant case. A summary of the results follows.
Table 32

Positive Extreme Deviant-Case A Priori Codebook

<table>
<thead>
<tr>
<th>Code definition</th>
<th>Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Instruction Logic</td>
<td>Superintendent: “I think, unfortunately that there is a belief out there that there is one way to teach reading.” “This is all nonsense because you can use any curriculum.”</td>
</tr>
<tr>
<td>Institutional logics are the “socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton &amp; Ocasio, 2008, p. 101). Institutional logics act as frames of reference that shape agent cognition (e.g., organizational sensemaking) and mobilize agent action (e.g., institutional work; Thornton et al., 2015).</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>Superintendent: “So, I get concerned when they start mandating curriculums. You mandate how we should teach and that’s where I start to get nervous.”</td>
</tr>
<tr>
<td>Complexity is the interaction of “incompatible prescriptions from multiple institutional logics” (Greenwood et al., 2011, p. 317).</td>
<td>Principal: “Well, I think, the superintendent may not have the same thoughts as me.”</td>
</tr>
<tr>
<td>Sensemaking</td>
<td>Superintendent: “Reading a lot of research and having good people that provide you the information and also being intelligent.”</td>
</tr>
<tr>
<td>Sensemaking is a process “prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn” (Maitlis &amp; Christianson, 2014, p. 67).</td>
<td>Principal: “There are three elementary school principals within our district as well as one high school assistant principal and principal. We work together to look at those guidelines, as I mentioned, one of our district employees, who’s in charge of instructional technology will come and make sure I understand it. I do a lot online just to make sure I’m understanding what policy is … what it is that I have to implement it … because I have to understand that to bring it to my teachers and make sure they understand.”</td>
</tr>
<tr>
<td>Complexity</td>
<td>Literacy Leader: “We share it with our staff either at professional development if it needs to be done [at the district level] or if it’s something that’s school-based, [it] will be at one of our staff meetings.”</td>
</tr>
<tr>
<td>First grade teacher: “There are some times when I feel like maybe our curriculum coordinator will bring in new ideas with her interpretation or what she’s seen at a different school that doesn’t match. And there’s a struggle with that.”</td>
<td>First grade teacher: “So taking what I have learned, and even my other colleagues from their schooling, like we come back and we kind of share those theories and share, you know.”</td>
</tr>
<tr>
<td>Complexities are the interaction of “incompatible prescriptions from multiple institutional logics”</td>
<td>Kindergarten teacher: “Informally first with my teaching partner. [Then] through … our professional learning community or through our grade level where we’ll talk about it. How do we implement it? How does it match with curriculum? And then the more formal conversation would happen once a month we meet grade level and often it’s just … teachers who are meeting, but when we have question we will invite in our language arts [coordinator].”</td>
</tr>
</tbody>
</table>
Institutional work is the “practices of individual and collective actors aimed at creating, maintaining, and disrupting institutions” (Lawrence et al., 2011, p. 53).

Superintendent: “Connecticut is the state of steady habits. True. Provincial in every way, shape and form. So, whenever the first few show up with anything policy wise they are usually following somebody else. So you just want to see what else is out there to kind of be monitoring your feedback community.”

Principal: “For instance, in our district right now, for the past three years, we have not had a language arts coordinator and that really bothers me because, we’re doing well in the reading, writing, aspect, but we’re going to have gaps. So, so I struggle with that. And I pushed and pushed and pushed and our superintendent is like, ‘Alright so we’re getting a humanities person’, it’s finally happening. We’re scoring well and I get that our superintendent is amazing. I absolutely think he’s phenomenal, but I have to remind him how important this is. And he’s like, ‘but it’s not broken’. Actually, it’s starting, it’s going … You know, we’re all not experts. Our teachers can’t be experts. They need someone to say here’s the newest policy that’s coming down from da, da, da.”

Literacy Leader: “If it entails reading or writing that’s primarily my job to investigate and make sure that everybody is, you know, using best practices in the classroom and we’re current.”

First grade teacher: “Before maybe one teacher, it might not work for their classroom, they’re doing this approach or no, they can’t do, or they they’re not willing to maybe make the change, or they’re stuck in their own ways. So, at times … I’m always like the cheerleader … we’ll just try it. You know, let’s try, or let me show you some strategies or … show me some strategies that you’re doing.”

Kindergarten teacher: “I defer [to policy] with some tweaks here and there, I defer.”

Policy coherence is achieved if the cognition and action of all individuals and groups at all systems levels align with policy goals (Honig & Hatch, 2004).

Superintendent: “I think we agree to disagree.”

Principal: “I agree with what our district has implemented in our reading policy. So I am 100% invested so I feel that I can … portray that to teachers and tell them the benefits.”

Literacy Leader: “I think that we do a really good job of, you know, implementing current practices and then ensuring that they’re occurring in the classroom the way they’re meant to be taught because we have like experts in every different area. I [also] feel like there’s some confusion about like is this our curriculum or is this not our curriculum.”

First grade teacher: “I feel like this year … we’re all on the same level. You know, I feel like we’re all thinking the same thing [and] that we’re all like expecting the same thing.”

Kindergarten teacher: “We have a really cohesive grade level. Really special where we all work well together and have a similar respect for each other, not necessarily all the exact same ideas or approach, but definitely on the same page. So it works. I feel blessed that I can say, up, down, and across we’re saying, excellent. In agreement. Excellent.”

Summary of Positive Extreme Deviant-Case A Priori Codebook Results

Reading-Instruction Logic

The district superintendent observed that the idea that there is “one way to teach reading” is “nonsense because you can use any curriculum” to teach reading. Yet the principal represented reading instruction as historically aligned with a specific way to teach reading informed by the Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching (Fountas & Pinnell, 2017), using the Units of Study (Calkins et al., 2015), and an Orton Gillingham approach to reading instruction (Gillingham & Stillman, 1997). The literacy leader and the first-grade teacher revealed reading-instruction logics in strong alignment with the principal’s framing. In contrast to the principal’s framing, the kindergarten teacher revealed that
despite holding respect for the reading-instruction logic espoused in context, the teacher does not embrace “the exact same ideas or approach” and expressed a preference for a meaning-emphasis approach emphasizing “exploration … exposure to just reading for the love of reading … reading aloud … having kids read lots of books, [and] valuing that reading a picture is reading.”

**Complexity**

Complexity was isolated to two systems levels in the positive-case school. When asked about the coherence of reading instruction logics, the superintendent stated, “I think we agree to disagree,” and the principal said, “well, I think, the superintendent may not have the same thoughts as me.” Significantly, the superintendent also stated, “as six-figure employees, principals need to be charged to do their jobs. So I don’t try to micromanage … I just give them enough rope to prove their point or mine.” In the end, the superintendent expressed but did not impose a reading-instruction logic. As a result, the complexity between the superintendent and the principal remained part of a private exchange and did not impact the school’s reading-instruction culture. Finally, complexity emerged between the imposed reading-instruction logic (a balance of code- and meaning-emphasis instruction) and the existing reading-instruction logic of veteran teachers (meaning-emphasis). To elaborate, the kindergarten teacher recounted “there are some times when … our curriculum coordinator will bring in new ideas with her interpretation of what she’s seen at a different school that doesn’t match [my approach to reading instruction], and there’s a struggle with that.”

**Sensemaking**

A unified sensemaking account emerged at most systems levels in the positive-case school. The principal, literacy leader, and first-grade teacher expressed shared accounts of their interpretation of reading policy, ideas about how reading develops and should be taught, ongoing
work to align reading practice with policy, abundant resources, effective professional
development, collegial collaboration and problem solving, and strategies to overcome challenges
including veteran-teacher resistance. The veteran kindergarten teacher stated that reading policy
is developmentally inappropriate, but also emphasized that they “deferred” to policy, despite
objections “with some tweaks here and there.”

**Institutional Work**

As described, the superintendent took an uninvolved approach and did not engage in
work to impose a reading-instruction logic on the positive case’s reading-instruction culture. The
principal, literacy leader, and first-grade teacher engaged in two types of work to disrupt and
transform the previously established meaning-emphasis reading-instruction logic. First, work to
disassociate meaning-emphasis reading instruction practices, rules, and technologies from their
moral foundations (virtue and necessity) and to undermine core meaning-emphasis assumptions
and beliefs. Concurrently, agents engaged in work to create a balanced reading-instruction logic,
including political work to redefine rules and improve access to resources, change belief
systems, and alter meaning-making systems. In response, resistant veteran teachers engaged in
work to maintain elements of the previously institutionalized reading-instruction logic through
acts of partial compliance with the imposed reading-instruction logic with “tweaks here and
there.” To date, institutional work to transform the reading-instruction culture and logic is
ongoing and accumulating positive effects.

**Policy Coherence**

In the positive-case reading-instruction culture, policy coherence is achieved at most
systems levels. Although the superintendent “agrees to disagree” with the principal’s focus on a
coherent approach to reading instruction, the superintendent also refuses to “micromanage”
(influence) reading instruction. The principal and the respected and influential literacy leader, special education teacher, and first-grade teacher engaged in ongoing mediation between external reading-policy pressures and locally institutionalized reading-instruction practices to transform the reading-instruction logic and culture to achieve widespread coherence. One resister, the veteran kindergarten teacher, stated, “We all work well together and have a similar respect for each other, not necessarily all the exact same ideas or approach.” They also stated that they “defer” to the school’s espoused reading-instruction logic.

Second Inductive Phase

New codes emerged during the first deductive phase, and the original five codes grew to include 12 additional codes. Codes met the criteria for inclusion if they revealed an additional microfoundational process between the structural input of reading policy and the cultural output of variation in reading-policy coherence. Different codes emerged for each deviant case at different levels of analysis. Nine new codes emerged in the less coherent negative extreme deviant case, including board resistance, deficit thinking, Dunning–Kruger bias, economic hardship, entrepreneurship concerned with maintaining institutions, fabrication, meaning-emphasis belief, oppositional autonomy, and resistance. Three new codes emerged in the more coherent positive extreme deviant case, including collaborative cocreation, cultural entrepreneurship, and partial autonomy. Again, the type of information coded was phenomenological and included individuals’ experience, expressed in phrases and paragraphs, extracted verbatim from interview transcripts. Tables 33 and 34 present emerged codes, including code names, definitions, and illustrative verbatim quotations.
Table 33

Negative Extreme Deviant-Case Emergent Codes

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<tr>
<th>Code definition</th>
<th>Illustrative quotes</th>
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<tr>
<td>Economic hardship</td>
<td>Superintendent: “But overall, our cost per pupil in all of our six schools … ranges anywhere between $23,000 per student and $32,000 per student [and at] $34,000 [one of our schools] has the highest per pupil cost of any school in Connecticut.”</td>
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| Difficulty caused by too little money of too few resources (Cambridge, 2020). | Principal: “I think they’re now starting to get the fact that people are saying, you know, I don’t have that money in my budget, I can’t you know I can’t do massive curriculum changes in one year.”

“This town is extremely frugal with how it spends its money. So if I’m going to spend its money-I better make really sure that what I’m purchasing has meaning and is really important and is being done for a really solid reason and can actually produce results.”

| Board resistance | Superintendent: “Each school has been so autonomous and principals are almost like in their own domain. They answer to their board. And central office has always kind of been considered … that’s who you go to if you have a policy question. That’s it. But they say, we as principals are going to run our schools the way we want, and we’re saying, you know, you manage schools, you’re the instructional leader, but we’re going to be doing the same thing as a region.”

Principal: “And so the individual schools … are really not feeling like they have a choice. And some of them have started to push back with their boards.”

First grade teacher: “In here? I think we would probably try to comply. I would be sick, but we have separate boards and I don’t think our board would make us do that.”

| Deficit thinking | Principal: “And also I think that, there’s a disconnect in demographics … because our schools are so radically different. That’s my own personal philosophy. I really think, for example, I came out of the [another school in the region], I was there for a number of years. Completely different demographics. It’s a beautiful setting, but it’s like [an impoverished inner city in Connecticut]. It’s got an urban mentality in a rural setting is basically what it is, and it’s got all of the things that go with that. And so I think when it comes to curriculum, you really got to look at the kids you’re teaching and who are they and what do you really need to get down to?”

Literacy Leader: “I see a student differently than their classroom teacher sees them. And I think that can sometimes make it challenging, especially when you have different viewpoints about how those students learn, and how they succeed, and how they work. And we see their needs differently when you’re working with them in different lights in different areas and different scenarios, their individual characteristics and learning styles come out different. It’s hard to communicate [with teachers] when you’re feeling differently.”

First grade teacher: “Some families don’t value [education] even though they say they do. It’s lip service. But what also has me nuts is that I have really able capable kids who don’t want to perform and don’t want to put it out and there’s no expectation at home to do it.”

“And here we have an advantage because … all the kids are exposed … I don’t want to say learn, you know, well I’ve taught it, doesn’t mean they’ve learned it.”

“However, I do feel that, that one school is listened to heavily, it is the … favorite school in this region. It has the highest test scores. Not necessarily because the teachers are effective but because of their population.”

Kindergarten teacher: “So I’m not sure that I completely agree with it [policy]. I understand why we’re moving in that direction. But I’m not sure that, like in my deep heart, I agree with it, necessarily, because I’m not sure that some of these, especially I have some little males in my class, that are just not developmentally there.”

“We all know that not all of those skills can be met in every single child developmentally.” |
### Code definition

**Dunning-Kruger bias** Failure to implement effective reading instruction emerges from ignorance, or a deficit of knowledge, and Dunning-Kruger bias, or an inability to detect ignorance (Dunning, 2011; Kruger & Dunning, 1999). Central to Dunning-Kruger bias are “unknown unknowns” or information that lies outside of an individual’s awareness and is therefore inconceivable (Dunning, 2011, p. 252).

**Belief that meaningful emphasis on reading instruction is legitimate.** Legitimacy is defined as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995, p. 574).

**Resistance** To resist is to exert force in opposition (Merriam-Webster, 2020).

**Entrepreneurship concerned with maintaining institutions** Refers to how interest driven individuals, groups, and organizations use mechanisms of framing, categorization, and storytelling to silence antagonists, protect their interests, and maintain the institutional order (Zilber, 2007, p. 1049).

### Illustrative quotes

**Superintendent:** “I would say one of the things is just the old habits of the staff, the way they’ve always done things and they feel it’s effective. They don’t see a need for change.”

**Principal:** “But when you’re getting the results that you’re getting and you’ve got students that are really growing. At this point, I sort of fail to see the necessity to completely rip the thing out of the ground by the roots right, and change it.”

**Literacy Leader:** “So my role is supporting those students who are having difficulty reading in the classroom. But regarding their classroom instruction, I think every teacher teaches it differently. Some use workshop model, some use guided reading instruction, and I just kind of, when I’m supporting in the classrooms, kind of learn and do what works best for them [teachers].”

**First grade teacher:** “I just find like the phonological piece is so important to [recently trained] teachers. They go right to phonics, and they’re not building [the foundation]. Its driving me nuts!”

**Kindergarten teacher:** “I do think that kids amazingly are able to learn to read with a variety of different strategies. I don’t think there’s one program that fits everybody. I think that amazingly children can learn to read and it’s just finding the best way. And sometimes it’s the best way for that student, sometimes, you know, they really need that really heavy phonics based for that particular student, whereas another student just naturally kind of gets it, understands it, can really build from it.”

**Principal:** “So when I’ve got a Columbia [Readers Workshop] or anything going really well, I’m not in the mood to really want to shift that at this point because I know that it’s working.”

**Literacy Leader:** [in response to my restating her statements] Me: “And when you go in to support children or teachers in the classroom you take the lead from their [teacher’s] style.”

**Literacy Leader:** “Exactly!”

**Me:** “So basically you’re taking the lead from the teacher.”

**Literacy Leader:** “Yes!”

**Me:** “So you don’t go in and superimpose another view.”

**Literacy Leader:** “Never, no.”

**First grade teacher:** “I just find like the phonological piece is so important to [recently trained] teachers. They go right to phonics, and they’re not building [the foundation]. Its driving me nuts!”

**Kindergarten teacher:** “I do think that kids amazingly are able to learn to read with a variety of different strategies. I don’t think there’s one program that fits everybody.”

**Principal:** “At this point, I have no intentions of changing that [reading instruction]. I’ve been under a lot of fire to change it over to this thing, or that thing, or whatever in the past year and a half. And this is not broken. At this point, I don’t really see a need to fix it. At this point … when you’re getting the results that you’re getting and you’ve got students that are really growing. At this point, I sort of fail to see the necessity to completely rip the thing out of the ground by the roots … and change it.”

“So when I’ve got a Columbia [Readers Workshop] or anything going really well, I’m not in the mood to really want to shift that at this point because I know that it’s working. Until you can show me something that’s so far and away, and beyond, that’s really going to move our kids, I just don’t feel like it’s the reasonable thing to do for kids. Because, why am I going to put them there, if I’m not convinced?”

**First grade teacher:**

Me: “Do you think that if the district came in with [a reading curriculum], do you think that there would be compliance or do you think that teachers would continue to do what they know how to do?”

**First grade teacher:** “In here? I think we would probably try to comply. I would be sick, but we have separate boards and I don’t think our board would make us do that.”

**Principal:** “And when I’ve got teachers who are willing to sign up for more training to keep going on this trajectory. I just think it’s, it’s not easy to get the hang of, but once you’ve got it’s good, and they all they all really learn to read well. And to me, and I just I can’t say enough about that. It’s so well thought out cognitively, developmentally, and it has a place for every single student. And I think that’s the most important piece. And what I’ve noticed, the difference that I’ve noticed, for example, in watching teachers that teach with this model versus using different models, is that they really know where they’re going. I mean, they really have a sense of where they’re going and have a really deep understanding at a granular level of what’s driving the learning.”

“Unlike some other programs where teachers just say, oh, it’s Tuesday. I’ve got to turn to this page and now I need to be working on this, and you just sort of it appears from the outside that there’s lots of bright and shiny things, but are they really learning how to read.”
Principal: “And it’s really intensive and they’re well trained.”
- “But, so I feel that our phonics, all of that. All of that granular baseline work here is pretty strong. Its intensive.”
- “And, central office really doesn’t have a problem with our reading program the way that we’re doing it.”
- “The jumps that they take in this program are phenomenal, I mean it’s amazing and with that being really, really strong and outcomes and they all really learn to read well!”

Principal: “So we would look at what would be the best way to do that here for kids because basically our focus here is what’s best for kids. And if we felt that it was going to be too disruptive, [if] we felt that this was the wrong time to introduce it, those would be things that we would decide in house here, and then make a case for it and take it to central office.”

“They want every individual school to be using the same thing but they can’t enforce it, because every school in the region is its own school district. I had a conversation, years ago, whenever I started teaching here, and the principal said it’s a beautiful thing because she said you can pull your district card. She said, when you feel you need to pull up the drawbridge. You can do it. And so there’s been a lot of that going on here the last few years.”

“At this point, I have no intentions of changing that [reading instruction]. I’ve been under a lot of fire to change it over to this thing, or that thing, or whatever in the past year and a half. And this is not broken. At this point, I don’t really see a need to fix it. At this point … when you’re getting the results that you’re getting and you’ve got students that are really growing. At this point, I sort of fail to see the necessity to completely rip the thing out of the ground by the roots … and change it.”

Table 34

**Positive Extreme Deviant-Case Emergent Codes**

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<tr>
<th>Code Name Definition</th>
<th>Illustrative quotes</th>
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| **Collaborative cocreation** | A process whereby “agents engage in ongoing negotiations, experimentation, competition, and learning, which resolves over time into shared conceptions of problems and solutions” coalescing in the “development until a common template becomes diffused” (Zietsma & McKnight, 2009, p. 144) | Principal: [regarding new policy initiative] “I would have all there, all people involved, but then I would definitely meet in small groups through our [professional learning community] PLCs, also through … one on one teacher meetings. So I would … make sure I go over it so they understand what has trickled down so that there’s no, you know sometimes policies can be negative to a teacher, like ‘ugh, something else. They’d brought us something else.’ So I try to keep a very upbeat, how it can help them inform their instruction help to learn about, their students better, things like that.”

“If I go deeper in so to help them [teachers] understand.”

“We are training our teachers in Orton Gillingham practice. So we’re really giving them those foundations. My big thing, as I say, is that you cannot build a foundation out of sand. Because it’ll look great for a little while and then it’s going to crumble.”

Literacy Leader: “So we actually were trained, we had a group of teachers initially trained, three, four years ago. So we’re certified. So I was one of them and two special ed teachers were also certified. And then from the other schools. It was like a cohort, we were together and we were trained and then we decided that it was like a worthy program and we piloted it for the following year for the whole district. So our PD money was all invested into this training, but it was more, it wasn’t like hands on, it was more of just the research and so now we’re investing more time with experts. So some people have moved past a certification and are kind of coaches. So that’s where we’re at right now.”

“We have this nice block of time every morning at 8: 25 that a lot of schools don’t have. So my role last year was to use that time to meet with teachers so I can add a schedule and had weekly meetings with each teacher. We also have … PLC time where we can work and as a specialist were able to kind of work with groups on an as needed basis. So if there’s something that the primary teachers need to hear, that would be my time to like get into their PLCs and we can talk about it as a group. [And] for an individual teacher, I would use my weekly meeting time.”

“We have a first grade teacher … she was trained initially with me. So … we consider her one of the experts in the OG model and another first grade teacher may come and just watch her workshop to see how she’s implementing or I may go over and watch the special ed teacher that had more training.”

“If it entails reading or writing that’s primarily my job to investigate and make sure that everybody is … using best practices in the classroom and that we’re current.”

“And we have some, a couple of teachers that have been here a long time, it was a hard time to get them to really buy into the curriculum … I know you still want to use the basal readers … but, Calkins is our
Cultural entrepreneurship refers to how individuals, groups, and organizations use mechanisms of framing, categorization, and storytelling to facilitate understanding, justification, and legitimation of an innovation (Lounsbury & Glynn, 2001).

Partial autonomy
Actors respond to complexity by assuming partial autonomy (loose coupling) with institutional roles (Thornton et al., 2015). Partial autonomy allows actors the freedom to reconfigure, recombine, and create new logics (Thornton et al., 2015). Further, partial autonomy allows actors to engage in sensemaking strategies, and to participate in institutional work leading to the creation, maintenance and disruption of institutions (Thornton et al., 2015).

Belief that reading is the product of decoding and comprehension
Skilled reading is the product of two components, decoding, or the use of letter-sound correspondence rules, and linguistic comprehension, or the use of words to derive meaning (Gough and Tunmer, 1986; Hoover & Gough, 1990).

Leader sensegiving
Leader sensegiving is “the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442).

curriculum and we are to abide by that … so just working together and I think having the opportunity to meet with teachers and go through different units … so I’m actually doing that.”

“So they [school leaders] kind of use us to make sure that when we meet with teachers, if there’s an issue, if they’re struggling with things, like we can take care of the little fires … and they trust us, and you feel like you’re trusted, and it’s working, and it makes a difference.”

First grade teacher: “What helps is when you feel the support you know from your admin or from your colleagues, but it doesn’t help us when you get the resistance. You know, like … they’re not willing to learn it or they’re not willing to try it. Or it’s just not the right time … so I’ve learned to say … you know what, maybe now’s a great time! But just sprinkling … the seeds or like … and then showing a little bit of an example maybe in a week or two, or a month or two, it will come.”

“So, at times … I’m always like the cheerleader [and say] we’ll just try it!”

“Our special ed teacher … has a lot more training in this multi-sensory approach [Orton Gillingham] … with a lot more hours, so she brings it to us and we have … professional development days like for eight hours, and it’s phenomenal. Not just theory, but like how to build it, how to incorporate it into your classroom.”

Kindergarten teacher: “I really appreciate that they are viewing the research sources they have within the district as valuable and important. And so we’re using each other for our professional development with a sprinkling of outside site stuff as needed. But I really love that.”

Principal: “I do a lot online just to make sure I’m understanding what policy is what it is that I have to implement … because I have to understand that to bring it to my teachers and make sure they understand.”

Literacy Leader: “What’s nice is we’re also able to go to other schools with something that we feel like an expert [in] at this point.”

First grade teacher:
Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a policy that came down, or is that something that emerged from your school team?”

First grade teacher: “Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades.”

First grade teacher: “When I first started, eight years ago, it [the school’s reading logic] was … whole language and … I was like this is crazy, like they don’t even know their alphabet … yet, and I have to do that [whole-language instruction] first. Yeah … it was difficult.”

Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades.”

What helps is when you feel the support you know from your admin or from your colleagues, but it doesn’t help us when you get the resistance. You know, like … they’re not willing to learn it or they’re not willing to try it. Or it’s just not the right time … so I’ve learned to say … you know what, maybe now’s a great time! But just sprinkling … the seeds or like … and then showing a little bit of an example maybe in a week or two, or a month or two, it will come.”

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Leader sensegiving
Leader sensegiving is “the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442).
Classification of Codes into Themes

Themes are “broad units of information that consist of several codes aggregated to form a common idea” (Creswell & Poth, 2018, p. 462). When considering the research questions, two broad themes common to both cases emerged to explain variations in degrees of reading-policy coherence, sensemaking, and institutional work. Although the two themes are common across cases, the aim of sensemaking and institutional work and the emergent codes embedded under themes are not common across cases. In the following discussions of themes and embedded codes, themes are bolded, and embedded codes are bolded and italicized.

In the negative case, sensemaking was defensive and driven by leaders. Codes embedded under the theme defensive sensemaking driven by leaders included belief that meaning-emphasis reading instruction is legitimate, deficit thinking, Dunning-Kruger bias, and economic hardship. In the negative case, institutional work aimed to buffer and maintain existing institutional arrangements. Codes embedded under the theme institutional work aimed at maintaining existing institutional arrangements included entrepreneurship concerned with maintaining institutions, fabrication, oppositional autonomy, and resistance.

In the positive case, sensemaking was collaborative and driven by leaders. Codes embedded under the theme collaborative sensemaking driven by leaders included autonomous reflexivity, the belief that reading is the product of decoding and comprehension, and leader sensegiving. In the positive case, institutional work aimed to recombine and reconcile the imposed and local reading-instruction logics. Codes embedded under the theme institutional work aimed at reconciliation included collaborative cocreation and cultural entrepreneurship.

"It depends on where they are in their teaching career as well. That pendulum, policies tend to sometimes come back, things of that sort. But it depends on where they are. I don’t find it the same for all.”
Negative Case Themes

Defensive sensemaking Driven by Leaders

In the negative-case school, the principal led defensive sensemaking to buffer literacy educators from the imposed reading policy. The principal’s actions emerged from the negative case’s dominant reading-instruction logic and a belief that meaning-emphasis reading instruction is legitimate. Legitimacy is “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995, p. 574). The belief that meaning-emphasis reading instruction is legitimate emerged from ignorance, or a deficit of knowledge, and Dunning–Kruger bias, or an inability to detect ignorance (Dunning, 2011; Kruger & Dunning, 1999). Central to Dunning–Kruger bias are “unknown unknowns” or information that lies outside of an individual’s awareness and is therefore inconceivable (Dunning, 2011, p. 252).

Significantly, confidence masks Dunning–Kruger bias in an alternative unfounded and inaccurate belief (Dunning, 2011) and involves actions to protect misbelief and associated practices (Schlosser et al., 2013).

The principal perceived and framed the imposed reading-policy logic, code-emphasis instruction, as a threat. The principal modeled and cultivated entrepreneurship concerned with maintaining institutions and used mechanisms of framing, categorization, and storytelling to silence antagonists, protect interests, and maintain the preferred institutional order (Zilber, 2007).

Deficit thinking and accounts of economic hardship informed sensemaking accounts. Using deficit thinking, educators blamed children’s genetic predispositions and experiences in families and communities for early reading failure. In this way, they efficiently exonerated the reading-instruction culture from culpability for reading failure and responsibility for improving
reading achievement (Henderson, 2002). Finally, educators used accounts of economic hardship or difficulty caused by too little money and too few resources (Cambridge, 2020) to reject any possibility of transforming the existing reading-instruction logic.

**Institutional Work Aimed at Maintaining Existing Institutional Arrangements**

In the negative-case school, literacy leaders, including the principal, the dedicated literacy leader, and a veteran teacher, engaged in individual and collective action aimed at maintaining the meaning-emphasis reading-instruction logic through oppositional autonomy, fabrication, and resistance. Using oppositional autonomy, the principal closed the school to the imposed reading-policy logic using openly confrontational and oppositional “legitimacy politics” to present the current reading-instruction logic as appropriate and correct to resist (exert force in opposition) and entirely reject the imposed reading policy (Kraatz, 2009, p. 75). The principal achieved this in part through the creation of fabrications (for deception) of an implausible reality surrounding the current reading-instruction logic.

Whereas the principal buffered the reading-instruction culture from the imposed reading-policy logic, the literacy leader and a veteran teacher acted to maintain the existing reading-policy logic. Agents concerned with maintaining existing logics engage in two types of work: adherence to rules and systems, and reproducing existing norms and beliefs (Lawrence & Suddaby, 2006, p. 230).

**Positive-Case Themes**

**Collaborative Sensemaking Driven by Leaders**

In the positive-case school, literacy leaders, including the principal, the dedicated literacy leader, and a respected and influential teacher, shaped organizational sensemaking through leader sensegiving and cultural entrepreneur, facilitated by autonomous reflexivity and
informed by the belief that reading is the product of decoding and comprehension. Leader sensegiving is the “process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442). In cultural entrepreneurship, individuals and groups use mechanisms of framing, categorization, and storytelling to facilitate understanding, justification, and legitimation of an innovation (Lounsbury & Glynn, 2001). Leaders demonstrated autonomous reflexivity, or the ability to reflect apart from the dominant reading-instruction logic (meaning-emphasis reading instruction; Archer, 2003). Thus unencumbered, leaders embraced the assumption that skilled reading is the product of two components: decoding, or the use of letter-sound correspondence rules, and linguistic comprehension, or the use of words to derive meaning (Gough & Tunmer, 1986; Hoover & Gough, 1990). Leader sensegiving led to a new sensemaking account—the reconciliation of the imposed reading-policy logic (code-emphasis reading instruction) with the local reading-policy logic (meaning-emphasis reading instruction)—to create a new hybrid logic (balanced reading instruction).

Study findings echoed Coburn’s (2001) findings. Findings included that in the positive case, literacy leaders orchestrated guided sensemaking and influenced “where sensemaking happened, by bringing and privileging certain messages about reading and not others, by being a strong voice in the construction of understanding, and by structuring collaboration in formal settings” (Coburn, 2001, p. 160). Study findings also reflected Maitlis’s (2005) findings. They included that literacy leaders provided formal guided sensegiving that was controlled, delivered warmly with humor and encouragement in planned, structured, engaging meetings with the entire organization. Additionally, leaders “created very different opportunities for teachers to engage deeply with messages from the environment” including regularly planned small groups (PLCs),
individual meetings (principal–teacher 1:1s, literacy leader–teacher 1:1s; Coburn, 2001, p. 161), coaching relationships, and informally through teacher collaboration (Coburn & Woulfin, 2012). Like Maitlis (2005), this study found that individuals embedded in the positive case responded to \textit{leader sensegiving} with the construction of a rich unified account and a series of consistent actions. Finally, under conditions of ongoing collaborative sensemaking, early resistance among veteran teachers is shifting to cooperation, evidenced by the enactment of reading instruction featuring meaning- and code-emphasis elements.

**Institutional Work Aimed at Reconciliation**

In the positive case, literacy leaders, including the principal, the dedicated literacy leader, and a respected and influential teacher, drove \textit{collaborative cocreation} to simultaneously disrupt and transform meaning-emphasis logics in an effort to reconcile meaning- and code-emphasis logics. \textit{Collaborative cocreation} includes efforts to “discredit prior institutional templates” while engaging “in ongoing negotiations, experimentation, competition, and learning, which resolves over time into shared conceptions of problems and solutions” (Zietsma & McKnight, 2009, pp. 144–145). \textit{Collaborative cocreation} was ongoing during professional-development days, PLCs, formal coaching relationships, and informal interactions. The shared conception emerged as a hybrid logic with “intact elements” drawn from both logics (Pache & Santos, 2013, p. 973). The transformation of the preexisting instructional logics emerged from three mechanisms during \textit{collaborative cocreation}: “peer learning, patterned social mechanisms, and shared understandings, aims, and practices” (Bridwell-Mitchell, 2015, p. 148). Finally, in the positive case, educators experienced \textit{collaborative cocreation} differently, depending on their preexisting worldviews and the ability to exercise \textit{autonomous reflexivity}. Figures 11 and 12 diagram codes organized under the two themes in each of the two extreme deviant-case schools.
Figure 11. Negative extreme deviant-case emergent codes organized under themes.

Figure 12. Positive extreme deviant-case emergent codes organized under themes.
Mixed Methods Results

Four research questions guided the approach to mixed methods analysis.

RQ6: How do district leaders’, principals’, literacy leaders’, and teachers’ descriptions of reading-instruction practices in context compare to one another?

RQ7: How do district leaders’, principals’, literacy leaders’, and teachers’ disclosure of where complexity is located compare to one another?

RQ8: In what way do the qualitative data, collected from interviews with district leaders, primary school principals, literacy leaders, and K–1 teachers, explain the degree of coherence between reading-policy guidelines and institutionalized reading-instruction practices in 16 small rural schools in Connecticut?

Cross-Case Analysis Facilitated by Joint Displays

During the final phase of analysis, mixed methods analysis, qualitative and quantitative results were merged into joint displays to facilitate cross-case analysis. Quantitative data accrued from curriculum reviews and structured observations and identified two extreme deviant cases: one school with the highest and one school with the lowest degree of reading-policy coherence. Thematic analysis of semistructured interviews of each case separately revealed different microfoundational processes linked to varying degrees of reading-policy coherence in each case. The joint displays compared the different qualitative results, side by side, to develop metainferences. A metainference is an “overall conclusion, explanation, or understanding developed through an integration of the inferences obtained from the qualitative and quantitative strands of the study” (Tashakkori & Teddlie, 2008, p. 101).

The two joint displays are organized vertically under two overarching themes: sensemaking, and institutional work. While broad themes are common across cases, underlying
microfoundational processes are not common across cases. Results for the negative and positive extreme deviant cases are presented side-by-side for comparison in two columns below each overarching theme. To assist the reader, **themes** are bolded, **codes** organized under themes are bolded and italicized, **code** definitions are italicized in plain text, and verbatim illustrative quotes are presented in plain text. Finally, brief summaries of metainferences are located in the row below each comparison. The joint displays are presented in Tables 35 and 36. An expanded summary of metainferences follows the joint displays.

**Table 35**

**Joint Displays to Facilitate Cross-Case Analysis: Sensemaking**

<table>
<thead>
<tr>
<th>Sensemaking</th>
<th>Negative Extreme Deviant Case</th>
<th>Positive Extreme Deviant Case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defensive Sensemaking Driven by Leaders</strong></td>
<td><strong>Collaborative Sensemaking Driven by Leaders</strong></td>
<td></td>
</tr>
<tr>
<td>1. Belief that meaning emphasis instruction is legitimate</td>
<td>1. Leader sensegiving</td>
<td></td>
</tr>
<tr>
<td>2. Deficit thinking</td>
<td>2. Partial autonomy</td>
<td></td>
</tr>
<tr>
<td>3. Dunning-Kruger bias</td>
<td>3. Reading is the product of decoding and comprehension</td>
<td></td>
</tr>
<tr>
<td>4. Economic hardship</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Belief that meaning emphasis instruction is legitimate</strong></td>
<td><strong>Belief that reading is the product of decoding and comprehension</strong></td>
<td></td>
</tr>
<tr>
<td>Legitimacy is defined as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995, p. 574).</td>
<td>Skilled reading is the product of two components, decoding, or the use of letter-sound correspondence rules, and linguistic comprehension, or the use of words to derive meaning (Gough &amp; Tunmer, 1986; Hoover &amp; Gough, 1990).</td>
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</tr>
<tr>
<td>Principal: “I’m not in the mood to really want to shift [current reading-instruction logic] at this point because I know that it’s working.”</td>
<td>First grade teacher: “When I first started, eight years ago, it [the school’s reading logic] was … whole language and … I was like this is crazy, like they don’t even know their alphabet … yet, and I have to do that [whole-language instruction] first. Yeah … it was difficult.”</td>
<td></td>
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<tr>
<td>Me: “So you don’t go in and superimpose another view.”</td>
<td>Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a policy that came down, or is that something that emerged from your school team?”</td>
<td></td>
</tr>
<tr>
<td>Literacy leader: “Never, no.”</td>
<td>First grade teacher: “Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades.”</td>
<td></td>
</tr>
<tr>
<td><strong>Deficit Thinking</strong></td>
<td><strong>Leader Sensegiving</strong></td>
<td></td>
</tr>
<tr>
<td>Using deficit thinking, educators blame children’s genetic predispositions and pre-school experiences within families and communities for early reading failure (Henderson, 2002).</td>
<td>Leader sensegiving is “the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia &amp; Chittipeddi, 1991, p. 442).</td>
<td></td>
</tr>
</tbody>
</table>
Literacy leader: “We see their needs differently when you’re working with them in different light areas in different areas, and different scenarios, their individual characteristics and learning styles come out different. It’s hard to communicate [with teachers] when you’re feeling differently.”

First grade teacher: “Some families don’t value [education] even though they say they do. It’s lip service. But what also has me nuts is that I have really able capable kids who don’t want to perform and don’t want to put it out and there’s no expectation at home to do it.”

Kindergarten teacher: “So I’m not sure that I completely agree with it [policy] … I’m not sure … in my deep heart, I agree with it, necessarily, because I’m not sure that some of these, especially I have some little males in my class, that are just not developmentally there.”

“We all know that not all of those skills can be met in every single child developmentally.”

Principal: “I do a lot online just to make sure I’m understanding what policy is … because I have to understand that to bring it to my teachers and make sure they understand.”

“Absolutely, go deeper in so help them understand.”

“I would have all there, all people involved, but then I would definitely meet in small groups through our PLCs … one on one teacher meetings. So I would have, you know, make sure I go over it so they understand what has come trickled down so that there’s no, you know sometimes policies can be negative to a teacher, like “ugh, something else.”

They’ve brought us something else. So I try to keep a very upbeat, how it can help them inform their instruction help to learn about, their students better things like that.”

“It depends on where they are in their teaching career as well. That pendulum, policies tend to sometimes come back, things of that sort. But it depends on where they are. I don’t find it the same for all.”

Economic Hardship

Difficulty caused by too little money and of too few resources

(Cambridge, 2020).

Principal: “This town is extremely frugal with how it spends its money. So if I’m going to spend its money-I better make sure really that what I’m purchasing has meaning and is really important and is being done for a really solid reason and can actually produce results because if it doesn’t, that’s not going to work.”

Literacy leader: “I do sometimes find it challenging to provide the best amount of support due to the lack of resources this school has just because of funding … and I don’t want to say we’re afraid to ask, but we know that funds are tight.”

Kindergarten teacher: “I think budget is a huge factor, with staffing, with intervention, with … being current, supplies that are current, I mean I know that we have books in the other room that are older than me.”

Metainference

The cross-case analysis revealed that sensemaking in the negative extreme deviant-case school emerged from and reproduced complexity. Conversely, in the positive extreme deviant case, sensemaking emerged from complexity, but reconciled complexity.

Table 36

**Joint Displays to Facilitate Cross-Case Analysis: Sensemaking**
Institutional work is the “practices of individual and collective actors aimed at creating, maintaining, and disrupting institutions” (Lawrence et al., 2011, p. 53).

### Negative Extreme Deviant Case

**Institutional Work Aimed at Maintaining Existing Institutional Arrangements**

1. **Entrepreneurs concerned with maintaining institutional logics**
2. **Fabrication**
3. **Oppositional Autonomy**
4. **Resistance**

**Entrepreneurs maintaining institutional logics**

Refers to how entrepreneurs, groups, and organizations use mechanisms of framing, categorization, and storytelling to silence antagonists, protect their interests, and maintain the institutional order (Zilber, 2007, p. 1049).

**Principal:** “When I’ve got teachers who are willing to sign up for more training to keep going on this trajectory … and they all really learn to read well. And to me, and I just can’t say enough about that. It’s so well thought out cognitively, developmentally, and it has a place for every single student. And I think that’s the most important piece. And what I’ve noticed, the difference that I’ve noticed, for example, in watching teachers that teach with this model versus using different models, is that … they really have a sense of where they’re going and have a really deep understanding … at a granular level of what’s driving the learning.”

**Fabrication**

To fabricate is to make up for the purpose of deception (Merriam-Webster, 2020).

Principal:

- “And it’s really intensive and they’re well trained.”
- “But, so I feel that our phonics, all of that. All of that granular baseline work here is pretty strong. Its intensive.”
- “And, central office really doesn’t have a problem with our reading program the way that we’re doing it.”
- “The jumps that they take in this program are phenomenal, I mean it’s amazing and with that being really, really strong and outcomes and they all they all really learn to read well!”

**Oppositional Autonomy**

“Involves openly confrontational and oppositional ‘legitimacy politics’ as when a leader wholly rejects the claims of some group” (Kravitz, 2009, p. 75).

**Principal:** “So we would look at what would be the best way to do that here for kids because basically our focus here is what’s best for kids. And if we felt that it was going to be too disruptive. We felt that this was the wrong time to introduce it, those would be things that we would decide in house here, and then make a case for it and take it to central office.”

“They want every individual school to be using the same thing but they can’t enforce it, because every school in the region is its own school district. I had a conversation, years and years ago, whenever I started teaching here, and the principal said it’s a beautiful thing because she said you can pull your district card. She said, when you feel you need to pull up the drawbridge. You can do it. And so there’s been a lot of that going on here the last few years.”

**Resistance**

To resist is to exert force in opposition (Merriam-Webster, 2020).

Superintendent: “Because each school has been so autonomous and principals are almost like in their own domain. They answer to their...”

### Positive Extreme Deviant Case

**Institutional Work Aimed at Reconciliation**

1. **Collaborative cocreation**
2. **Cultural entrepreneurship**

**Collaborative cocreation**

A process whereby “agents engage in ongoing negotiations, experimentation, competition, and learning, which resolves over time into shared conceptions of problems and solutions” coalescing in the “development until a common template becomes diffused” (Zietsma & McKnight, 2009, p. 144).

**Principal:** [regarding launching a new policy initiative] “[At first] I would have all there, all people involved, but then I would definitely meet in small groups through our PLCs, also through … one on one teacher meetings. So I would … make sure I go over it so they understand what has trickled down so that there’s no, you know sometimes policies can be negative to a teacher, like ‘ugh, something else. They’ve brought us something else.’ So I try to keep a very upbeat, how it can help them inform their instruction, help to learn about their students better, things like that.”

“[I] go deeper in so to help them [teachers] understand.”

“We are training our teachers in Orton Gillingham practice. So we’re really giving them those foundations. My big thing, as I say, is that you cannot build a foundation out of sand. Because it’ll look great for a little while and then it’s going to crumble.”

**Literacy leader:** “So we actually were trained, we had a group of teachers initially trained, three, four years ago … It was like a cohort, we were together and we were trained and then we decided that it was like a worthy program and we piloted it for the following year … So our PD money was all invested into this training, but it was more—it wasn’t like hands on, it was more of just the research and so now we’re investing more time with experts. So some people have moved on past a certification and are kind of coaches. So that’s where we’re at right now.”

“We have this nice block of time every morning at 8:25 that a lot of schools don’t have. So my role [is] to meet with teachers so I can add a schedule and had weekly meetings with each teacher. We also have like our PLC time where we can work and as a specialist were able to kind of work with groups on an as needed basis. So if there’s something that the primary teachers need to hear, that would be my time to like get into their PLCs and we can talk about it as a group. And then for an individual teacher, I would use my weekly meeting time.”

“We have a first grade teacher … she was trained initially with me. So … we consider her one of the experts in the OG model and another first grade teacher may come and just watch her workshop to see how she’s implementing or I may go over and watch the special ed teacher that had more training.”

**First grade teacher:** “What helps is when you feel the support you know from your admin or from your colleagues, but it doesn’t help us when you get the resistance. You know, like … they’re not willing to learn it or they’re not willing to try it. Or it’s just not the right time … so I’ve learned to say … you know what, maybe now’s a great time. But just sprinkling … the seeds or like … and then showing a little bit of an example maybe in a week or two, or a month or two, it will come.”

“So, at times … I’m always like the cheerleader [and say] we’ll just try it!”

“Our special ed teacher … has a lot more training in this multi-sensory approach [Orton Gillingham] … with a lot more hours-so she brings it to us and we have … professional development days like for eight hours,...”
board. And … they say, we as principals are going to run our schools the way we want.”

Principal: “At this point, I have no intentions of changing [reading instruction]. I’ve been under a lot of fire to change it over … the past year and a half. And this is not broken. At this point, I don’t really see a need to fix it … At this point, I … fail to see the necessity to completely rip the thing out of the ground by the roots … and change it.”

“…And so the individual schools … are really not feeling like they have a choice. And some of them have started to push back with their boards.”

First grade teacher: I think we would probably try to comply. I would be sick, but we have separate boards and I don’t think our board would make us do that.”

and it was phenomenal. Not just theory, but like how to build it, how to incorporate it into your classroom.”

Kindergarten teacher: “I really appreciate that they are viewing the research sources they have within the district as valuable and important. And so we’re using each other for our professional development with a sprinkling of outside site stuff as needed. But I really love that.”

Cultural Entrepreneurship

Cultural entrepreneurship refers to how individuals, groups, and organizations use mechanisms of framing, categorization, and storytelling to facilitate understanding, justification, and legitimation of an innovation (Lounsbury & Glynn, 2001).

Superintendent: “We are constantly monitoring legislation, monitoring trends. Looking at new bills that have been proposed testifying against them testifying for them.”

Principal: “I do a lot online just to make sure I’m understanding what policy is what it is that I have to implement it and then because I have to understand that to bring it to my teachers and make sure they understand.”

Literacy leader: “What’s nice is we’re also able to go to other schools [with] something that we feel like an expert [in] at this point.”

Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a policy that came down, or is that something that emerged from your school team?”

First grade teacher: “Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades.”

Metainference

As with sensemaking, the cross-case analysis revealed that institutional work in the negative extreme deviant-case school emerged from and reproduced complexity. Conversely, in the positive extreme deviant case, institutional work also emerged from complexity.

Metainference: Sensemaking

A metainference is an “overall conclusion, explanation, or understanding developed through an integration of the inferences obtained from the qualitative and quantitative strands of the study” (Tashakkori & Teddlie, 2008, p. 101). The cross-case analysis revealed that sensemaking in the negative extreme deviant-case school emerged from and reproduced complexity. In contrast, in the positive extreme deviant case, sensemaking emerged from complexity, but reconciled complexity.

In the negative extreme deviant case, low reading-policy coherence linked with various sensemaking accounts constructed in disorganized factions to protect the existing reading-instruction logic while disrupting the imposed reading-instruction logic. Participants constructed accounts strategically and disseminated them tactically to manage external impressions of the
existing reading-instruction logic, contest the imposed reading-instruction logic, vilify and reduce the power of proponents of the imposed logic, and blame children, families, communities, and circumstances for early reading failure. Sensemaking accounts in the negative-case school exonerated literacy educators from culpability for low early reading achievement and, therefore, responsibility for improving reading instruction and reading achievement.

In contrast, in the positive case, a high degree of reading-policy coherence linked with effective leader sensegiving provided by the principal, literacy leader, and influential and respected expert literacy educators. Sensegiving featured a single privileged message, guided, controlled, animated, and conducted in planned, structured, and engaging meetings with the entire organization, in regularly scheduled small-group interactions, and individually as needed. Literacy educators responded to sensegiving with the construction of a single unified account and a series of consistent actions. Sensemaking accounts in the positive extreme deviant case assigned responsibility for improving reading instruction and reading achievement to the reading-instruction culture’s processes and practices.

Metainference: Institutional Work

As with sensemaking, the cross-case analysis revealed that institutional work in the negative extreme deviant-case school emerged from and reproduced complexity. In the negative case, institutional work was defensive. It coalesced to decouple (separate) the operational structures of the existing reading-instruction logic, or “how we do things around here,” from the prescriptive and normative structures of the imposed reading-instruction logic.

In contrast, in the positive extreme deviant case, institutional work also emerged from complexity. Yet, institutional work coalesced to recombine two competing internal logics: the preexisting meaning-emphasis reading-instruction logic and the imposed code-emphasis reading-
instruction logic. In the positive case, literacy educators continually interpreted reading policy and engaged in strategic coupling (combining) activities to attain reading-policy coherence. Combining institutional logics leads to a new hybrid logic, in this case, balanced reading instruction, to eliminate complexity.

**Summary**

This chapter presented results from the quantitative, qualitative, and mixed methods phases of the explanatory sequential mixed methods research study. First phase quantitative results drew from curriculum reviews and structured observations, identifying degrees of reading-policy coherence. Quantitative results informed the selection of two extreme deviant-case schools, one with higher and one with lower degrees of reading-policy coherence.

Qualitative results drawn from interviews conducted at multiple levels in each of the extreme deviant-case schools revealed two themes common to both cases that explained variations in degrees of reading-policy coherence, sensemaking, and institutional work. The emergent codes embedded under themes were not common across cases. In the negative extreme deviant case, emergent codes embedded under sensemaking included the belief that meaning-emphasis instruction is legitimate, deficit thinking, with Dunning–Kruger bias, and includes economic hardship. Emergent codes embedded under institutional work in the negative case included entrepreneurs concerned with maintaining institutional logics, fabrication, oppositional autonomy, and resistance. In the positive extreme deviant case, emergent codes embedded under sensemaking included leader sensegiving, partial autonomy, and the understanding that reading is the product of decoding and comprehension. Emergent codes embedded under institutional work in the positive case included collaborative cocreation, cultural entrepreneurship, and partial autonomy.
During mixed methods analysis, qualitative and quantitative data sets were merged into joint displays to facilitate cross-case analysis and to develop metainferences. Metainferences included that sensemaking and institutional work in the negative extreme deviant case emerged from complexity and coalesced to reproduce complexity. In contrast, although sensemaking and institutional work in the positive extreme deviant case also emerged from complexity, they coalesced to reconcile complexity. Chapter 6 presents a discussion of the results.
Chapter 6

Discussion

The purpose of this explanatory sequential mixed methods research study was to use qualitative findings—individuals’ descriptions of their experience in reading-instruction cultures—to explain the quantitative results: variations in degrees of reading-policy coherence in 16 small rural schools in northwest Connecticut. Reading-policy coherence is achieved if the cognition and action of all individuals and groups at all systems levels in a reading-instruction culture align with reading-policy goals (Honig & Hatch, 2004). Quantitative results drawn from document analyses and structured observations identified positive and negative extreme deviant cases: the schools with the highest and lowest degrees of reading-policy coherence. Qualitative results drawn from semistructured interviews at multiple levels in each case captured individuals’ circumstances and experiences. Within-case analysis linked specific microfoundational processes to high and low degrees of reading-policy coherence. Two metainferences15 emerged from mixed methods cross-case analysis. In the negative case, microfoundational processes emerged from complexity16 and coalesced to protect the local reading-instruction logic. In contrast, in the positive case reading-instruction culture, microfoundational processes also emerged from complexity but coalesced to reconcile conflicting logics by recombining imposed and local reading-instruction logics into a new hybrid logic. Finally, an overarching insight emerged from the integration of quantitative and qualitative findings; ongoing and dynamic policy mediation concurrently—at all systems levels in a

15 A metainference is an “overall conclusion, explanation, or understanding developed through an integration of the inferences obtained from the qualitative and quantitative strands of the study” (Tashakkori & Teddlie, 2008, p. 101).

16 Complexity is the interaction of “incompatible prescriptions from multiple institutional logics” (Greenwood et al., p. 317).
reading-instruction culture—is essential to transform reading-instruction logics and highly institutionalized processes and practices, and to craft reading-policy coherence.

This chapter serves three purposes. First, the chapter provides the reader with a “fly on the wall” view of the negative and positive case reading-instruction cultures. Second, this chapter links qualitative codes and themes to specific quantitative results to answer each research question. Finally, in alignment with the intent of an explanatory sequential research design, qualitative codes and themes yield insights that explain the quantitative results: variations in degrees of reading-policy coherence. Table 37 outlines the chapter’s organization.

Table 37

*Chapter Organization*

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<th>Researcher Position and Reflexivity</th>
<th>Audience: Policy Mediators</th>
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<th>Negative and Positive Case Observations</th>
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**Researcher Position and Reflexivity**

A researcher’s position, or experience, influences research outcomes. Reflexivity involves acknowledging, reflecting on, and bracketing researcher position and assumptions that may shape research outcomes. Researchers express reflexivity by stating their position explicitly,
revealing how their position influences their interpretation of the phenomenon of interest and disclosing benefit from the research (Creswell & Poth, 2018).

As a school administrator, my top-down efforts to transform a meaning-emphasis reading-instruction logic were resisted and rejected. Later, as a doctoral student, I conducted 7 months of participant and nonparticipant observations embedded in a rural reading-instruction culture where I observed micro- and mesolevel social processes that reproduced and protected a meaning-emphasis reading-instruction logic. During that time, I also read the works of seminal and contemporary institutionalists and made theoretical connections to the processes I observed.

Several a priori assumptions emerged from my position and informed my research. First, well-meaning and hardworking superintendents, principals, and literacy educators are locked into reading-instruction cultures where highly institutionalized processes and practices shape their cognition and action. Second, the imposition of a top-down policy mandate alone does not achieve educational reform. Third, individuals embedded in instructional cultures craft educational reform as they negotiate between an imposed policy mandate and local processes and practices. Just as educators are locked into reading-instruction cultures, students, families, and communities are also locked into local reading-instruction cultures. Finally, the science of reading informs responsible and ethical reading instruction rather than unfounded belief.

Study outcomes may provide me with professional and scholarly benefit. As an educational consultant, I plan to replicate the evaluation method developed in this study to isolate the location of complexity in reading-instruction cultures. To extend this research, I designed an intervention to assist the study audience to mediate and reconcile complexity between reading-policy and reading-instruction logics to achieve reading policy coherence.
Audience: Leaders as Reading-Policy Mediating Agents

This research study is of interest to leaders who mediate (intervene to reconcile) complexity or conflict between externally imposed and locally institutionalized reading-instruction logics to achieve reading-policy coherence. Mediating agents include superintendents, principals, and literacy coaches. Mediation to achieve policy coherence is accomplished through a process of negotiation whereby school leaders and central office administrators continually craft the fit between external policy demands and schools’ own goals and strategies and use external demands strategically to inform and enable implementation of those goals and strategies. (Honig & Hatch, 2004, p. 19)

Policy coherence is achieved when the cognition and action of all individuals at all systems levels align with policy intent (Honig & Hatch, 2004).

Successful policy mediation is central to achieving reading-policy coherence. Mediation is considered successful when leaders respond positively and responsibly to a policy with actions to transform district and school norms, beliefs, values, processes, and practices (Rorrer & Skrla, 2005). District leaders mediate through warm and trusting relationships and the provision of strong and equitable structures, resource mobilization, whole-systems learning, accountability, praise, and celebration (e.g., Rorrer & Skrla, 2005). Principals mediate between district goals and teacher resistance by “earning teacher support” toward policy goals and adjusting policy goals to teachers’ “attitudes and needs” (Shaked & Schechter, 2017, p. 32). Literacy coaches mediate between school goals and instruction practices by modeling approaches in alignment with policy guidelines, developing shared understandings, facilitating reciprocal communication among school leaders and educators (Woulfin & Rigby, 2017), and applying social pressure to conform with policy guidelines (Coburn & Woulfin, 2012). Significantly, achieving reading-policy
coherence aligns with improved reading achievement (Al Otaiba et al., 2008; Gamse, Jacob, Horst, Boulay & Unlu, 2008; Newmann, Smith, Allensworth & Bryk, 2001).

This research supports leaders’ mediation of policy in several ways. The research presents a method to evaluate the degree of reading-policy coherence in context. The research offers a model to locate complexity between imposed and local reading-instruction logics and isolates the locations in the greatest need of mediation to increase leader efficiency. Finally, generalizing the method and model improves the effectiveness of an already existing educational system.

**Case and Setting Descriptions**

For this study, case was conceptualized as a phenomenon processed socially across contexts (Bartlett & Vavrus, 2017). The phenomenon of interest, varying degrees of reading-policy coherence, emerged from social processes in two settings: the negative and positive case reading-instruction cultures. Table 38 presents demographic, organizational, per-pupil expenditure, and reading-achievement information for each case. Information is presented side by side to facilitate comparison.

**Negative and Positive Case Observation Descriptions**

The next section presents reading-instruction vignettes drawn from observations of reading instruction. Side-by-side organization of the vignettes assists the reader to “learn from the cases for themselves” (Creswell & Poth, 2018, p. 206). Brief curriculum and instructional-approach summaries preface the vignettes. Summaries equip the reader to judge implementation fidelity. Table 39 presents vignettes drawn from observations.
Curriculum and Instruction Summaries

The negative and positive cases both implement Units of Study. The positive case also relies on the Fountas and Pinnell Literacy Continuum and an Orton Gillingham approach to reading instruction. The negative case also implements early literacy groups.

Readers Workshop

Units of Study, or more commonly Readers Workshop (Calkins et al., 2015), is prescriptive and includes four sequenced elements. The 45- to 60-minute workshop opens with a 5- to 10-minute minilesson during which the teacher names a teaching point, supports guided practice, and links the teaching point to independent practice. During the 35 to 45 minutes of independent practice, the teacher circulates to conduct brief individual and small-group conferences to support practice. The teacher interrupts the independent practice midway to address the whole class once for 3 to 5 minutes to reinforce and extend the minilesson teaching point. The lesson concludes with a 3- to 5-minute whole-group reflection.

Fountas and Pinnell Literacy Continuum

The Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching (Fountas & Pinnell, 2017) is used responsively and is therefore not prescriptive.

The Orton Gillingham Approach

The positive-case school also used an Orton Gillingham approach to reading instruction. The Orton Gillingham approach is a “systematic, sequential, multisensory, synthetic, and phonics-based approach to teaching reading. Explicit instruction is provided in phonology and phonological awareness, sound-symbol correspondence, syllables, morphology, syntax, and semantics” (Ritchey & Goeke, 2006, p. 171).
Early Literacy Groups

Early literacy-group practices are prescriptive (Canady & Canady, 2012). Teachers assign three to seven students to cross-grade-level groups based on reading-assessment results. Early literacy team members “flood” classrooms once in the morning and once again in the afternoon for 30 minutes (Canady & Canady, 2012, p. 4). During morning early literacy groups, teachers provide direct and explicit instruction, and during afternoon early literacy groups, teachers provide guided practice.

Table 38

Demographic, Organizational, Per-Pupil Expenditure, and Reading Achievement Information

<table>
<thead>
<tr>
<th>Negative Case</th>
<th>Positive Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>The negative case emerged in a small rural kindergarten through eighth-grade school.</td>
<td>The positive case emerged in a small rural pre-kindergarten through sixth-grade school.</td>
</tr>
<tr>
<td>Reading Achievement</td>
<td>Reading Achievement</td>
</tr>
<tr>
<td>Bottom 50% in the state.</td>
<td>Top 30% in the state.</td>
</tr>
<tr>
<td>Annual Per-pupil Expenditures: $37,013*</td>
<td>Annual Per-pupil Expenditures: $21,776*</td>
</tr>
<tr>
<td>* Of the 522 elementary schools in Connecticut, the negative case school had the fifth-higher per-pupil expenditure. The state-wide average per-pupil expenditure is $16,998.</td>
<td>*The state-wide average per-pupil expenditure is $16,998.</td>
</tr>
<tr>
<td>Organization</td>
<td>Organization</td>
</tr>
<tr>
<td>• One of six kindergarten through eighth-grade schools that feed into a regionalized high school.</td>
<td>• One of three kindergarten through sixth-grade schools that feed into regionalized middle and high schools.</td>
</tr>
<tr>
<td>• Each of the six kindergarten through eighth-grade schools retain an independent school board.</td>
<td>• The region is served by one centralized board of education.</td>
</tr>
<tr>
<td>• Except for federal grant money dispersed by the region’s central office, school resources are drawn from individual town budgets and disbursement is controlled by individual school boards.</td>
<td>• During the 2019–2020 school year, one principal led 14 teachers.</td>
</tr>
<tr>
<td>• During the 2019–2020 school year, one principal led 12 teachers and three instructional aides (National Center of Educational Statistics [NCES], 2020).</td>
<td>• The average class size was 14, and the student to teacher ratio during instruction was 14:1 (NCES, 2020).</td>
</tr>
<tr>
<td>• The average class size was nine and the student to teacher ratio during instruction was 6:1*</td>
<td>*The school ranked in the top 10% for the lowest student to teacher ratio in the state (Public School Review [PSR], 2020).</td>
</tr>
<tr>
<td>Demographics</td>
<td>Demographics</td>
</tr>
<tr>
<td>• Of the school’s 73 students, 92% were White, 0% were Black, 8% were Hispanic or Latino.</td>
<td>• Of 195 students, 92% were White, 1% were Black, 2% were Hispanic or Latino, 5% were two or more race.</td>
</tr>
<tr>
<td>• Less than 1% spoke a home language other than English</td>
<td>• Less than 1% spoke a home language other than English</td>
</tr>
<tr>
<td>• 12% qualified for free and reduced lunch (PSR, 2020).</td>
<td>• 7% qualified for free or reduced lunch (PSR, 2020).</td>
</tr>
</tbody>
</table>
Table 39

Negative- and Positive-Case Observations

<table>
<thead>
<tr>
<th>Core Reading Curriculums</th>
<th>The Negative Case Kindergarten Reading Instruction</th>
<th>The Positive Case Kindergarten Reading Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The Teachers College Reading and Writing Project: Units of Study for Teaching Reading</td>
<td>• Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching</td>
<td></td>
</tr>
<tr>
<td>Instructional Approach</td>
<td>Early literacy group practices</td>
<td>• The Teachers College Reading and Writing Project: Units of Study for Teaching Reading</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instructional Approach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The Orton Gillingham</td>
</tr>
</tbody>
</table>

### Reading-Instruction Observations

The negative case school features multi-grade classrooms. Observations of kindergarten and first-grade reading instruction occurred in a combined kindergarten, first, and second-grade class. Participants included two co-teachers, two assistant teachers, the literacy leader, and 21 kindergarten, first, and second-grade students. *Units of Study Readers Workshop* was scheduled from 10:10 to 10:40, and early literacy groups were scheduled from 10:40 to 11:10. Kindergarten students were separated from first and second-grade students during Readers Workshop. Later, during early literacy groups, students were grouped not by grade but by reading skill deficit.

At 10:15, eight kindergarten students and one co-teacher moved to a separate room for reading instruction. During the transition, the teacher stated “Wait until you see how well they read; no one believes how well they read.”

The teacher settled students on the rug around a big book displayed on an easel. The book, *I was Walking Down the Road* (Barchas, 1988), is a predictable rhyming book with pictures that match the text. The teacher asked students to read the title, but students didn’t respond. Using a pointer, the teacher guided students to note the author, illustrator, title page, and dedication page. Then the teacher led students to examine the picture on the front cover and guided a discussion about the time of year the image represented. Turning to the first page, the teacher stated, “I really want you to look for patterns.” And “A lot of these words we can read in a ‘snap’ (previously memorized words).” The teacher pointed to the word *put* and stated, “we haven’t seen this word before,” and first modeled and then invited students to sing the word *put* several times.

Next, the teacher read the first two rhyming repetitions and asked the students what they noticed. Students responded, “pattern,” “rhythm,” and “rhyming.” The teacher asked, “Who sees the pattern?” Students mimicked the pattern “I saw an animal,” “I caught it,” “I put it in a cage.” The teacher modeled chanting the repeated phrase and used the pointer to indicate picture cues used to guess words that change on each page. The teacher pointed out that the words that changed also rhymed. For instance, “I was jumping on a log. Then I saw a little frog. I caught it. I picked it up. I put it in a cage.” The students chanted repeated patterns chorally but made mistakes guessing unfamiliar words from pictures. For example, students guessed the more familiar frog for the less familiar toad, shell for snail, milk for cider, and bird for sparrow.

The teacher closed the kindergarten reading lesson after about 20 minutes stating “Readers, we will read more tomorrow. So many great snap words! Did the rhyming pattern help you read?”

At 10:00, the kindergarten teacher, a paraprofessional, and 14 kindergarten students gathered on the rug. The teacher stated, “before we do groups, I have a sounding out box.” The “star” student pulled large letter cards from the box. The teacher guided students to make the corresponding sound for each letter and then organized letter cards on a frame to spell CVC words (consonant, vowel, consonant, e.g., tip). The teacher guided students to tap individual letter sounds on their arm, and then to swipe down their arms quickly as they blended individual sounds into words. The procedure was repeated multiple times.

At 10:10, kindergarten students were organized into three groups. Five students used an iPad with the software program Lexia. The paraprofessional conducted a guided reading group with five students. The teacher led four students in phonemic awareness and concepts of print activities followed by guided reading activities. Students used dry erase markers and whiteboards to respond to teacher prompts to print their name with an initial capital letter followed by lowercase letters, spell individual sounds (e.g., what spells the /p/ sound?), and identify missing letters (Print c, then d. What comes next?).

During guided reading, the teacher prompted students to “practice…pointing” and to “open to the first page and point to interesting things on that page.” “In your head, tell yourself what you see.” A student observed “a crab.” The teacher exclaimed, “you read the picture!” Another student questioned, “it says crab? I don’t see a c.” The teacher then directed students to turn to the first page and point to the first word on the page. A student read “I.” The teacher stated, “that’s it, we are not going to read any more words.” Finally, the teacher directed students to use their pointer finger to count each word on the front cover. At that point, groups switched and the teacher repeated the same activities with the next group.
At 10:35, the teacher directed students to pick one piece of completed writing from their writing folder to reread with a partner. Students were directed to give partners feedback regarding how “smooth and delicious” their reading was. At 10:40, the teacher recalled students to the rug and asked them to repeat the learning target. The teacher asked students to share the feedback they gave their partners before directing students to go to their seats with their book bins to read independently.

At 10:41, the teacher conferred with a student who had selected a decodable reader to read independently. The teacher directed the student to scan the pictures before beginning to read. The student used decoding skills, including blending individual letter sounds, to identify unknown words. When the student struggled to decode a word, the teacher stated, “go back to the beginning, get a running start, and read it smooth and delicious.” The student went back to the beginning of the book but continued to decode words. The teacher remarked, “I like how you are monitoring your reading, but check to see if it makes sense.” The teacher asked, “how are you going to reach the target?” (I can reread to help me make better sense). Then the teacher directed “let’s do another read looking at the pictures because, at your level, there is as much meaning in the pictures as the words.” The teacher then called out to the group, “who can tell me the target?” Students responded, “I can reread to help me make better sense.” The teacher turned back to the 1:1 conference, and the student reread the book very quickly without decoding words. The teacher ended with, “okay, take that book home and practice tonight.” The teacher closed the first- and second-grade reading lesson at 10:50 by directing students to line up for early literacy groups.

The Negative Case

Early Literacy Groups

The 21 kindergarten, first, and second-grade students were divided into five multi-grade early literacy groups based on the Words Their Way Inventory (Bear et al., 2015) and the Waterford Early Reading Program assessments (Waterford Institute, 1995). On the day that I observed, groups began at 10:53 and ended at 11:10. Group A was led by a paraeducator and included kindergarten, first, and second-grade students. Group A completed short and long vowel sound sort and a beginning sound sort. In the sorts, students were expected to recognize and generalize patterns independently. Group B was led by the literacy leader and was composed of kindergarten students. Group B played beginning and ending letter sound bingo. Groups C and D were composed of second-grade “book clubs” led by a co-teacher and a paraeducator. Book clubs used a guided reading approach supporting meaning-emphasis reading strategies. Groups C and D completed a worksheet to determine if the book they were reading “could be real.” Finally, Group E was composed of kindergarten students and was led by a co-teacher. Group E used a guided reading format and a combination of meaning-emphasis strategies and code-emphasis strategies to read and respond to a poem.

At 9:30, the first-grade teacher settled with 14 students seated on a rug. The teacher read a chapter from The Mouse and the Motorcycle (Cleary, 1965). An illustration from the book was projected on the whiteboard. During the reading, the teacher encountered and repeated the word “ill” and asked, “what does ill mean?” A few students responded, “sick.” After completing the chapter, the teacher guided students first to define and then gave examples from the chapter of setting, events, character, story problem, and problem solution. One student identified the story problem as “the mouse got caught in the cake tin, ate too much cake, and got ill.” The teacher responded, “I don’t know what I would do if I opened a cake tin to find a mouse!” and then directed “turn to your partner and share what you would do if you opened a cake tin and found a mouse.” The teacher and paraeducator circulated and conferred with partners.

Next, the teacher projected a learning target on the whiteboard. The Boss Rule: I can be the boss of my reading by asking and answering questions in my book. I can prove this by jotting my thoughts in my note catcher. The teacher projected a note catcher, a table with cells labeled title, character, setting, problem, and solution. The teacher guided students to complete the projected note catcher for the chapter from The Mouse and the Motorcycle (Cleary, 1965). The teacher then directed students to read with partners and collaborate to fill in individual note catchers. Preslected books with varying degrees of difficulty were distributed to partners. The teacher circulated and supported students to identify unknown words using decoding strategies and to complete the note catcher.

At 10:00, the first-grade teacher called students to the rug with their note catchers. Images of the books students read to complete their note catchers were projected on the board. The teacher stated, “let’s review, what are some of the important parts readers want to remember from their books?” The students called out “characters,” “setting,” “time of day,” and “problem.” The teacher projected the note catcher on the board, guided students to review and define each component, and then invited students to volunteer to share their work. Two teams of students shared their outcomes. Other teams share where they got “stuck.”

At 10:10, students broke for snack. During snack, the teacher dimmed the lights and projected a web-based read-aloud program featuring an expository science text (factual). While students ate, the teacher and the paraeducator set up literacy stations and reviewed literacy station goals. During the last few minutes of snack, the teacher guided students to answer comprehension questions for the projected read aloud.
Using Institutional Theory to Develop a New Lens

A canon of rigorous reading research provides evidence of the science of reading, the components of effective reading instruction, and knowledge of how reading develops and should be taught. To explain low early reading achievement, reading researchers have focused heavily on investigating the cognitive skills involved in reading and developmental deficits emerging from inadequate early experience and neurobiological differences that make learning to read difficult. Reading researchers neglect, however, to investigate learning to read as a social process. This study used an institutional lens and conceptualized low early reading achievement not as a reading skill problem, but as a problem emanating from the instructional activities and cultural processes institutionalized in schools.

Summary of Results by Research Question

The next section first reviews quantitative findings, then links qualitative codes and themes to quantitative results to answer qualitative questions, and finally integrates quantitative and qualitative data by merging to answer mixed methods questions. During the first quantitative phase, results from document analysis and observations answered two research questions.

Review of the Quantitative Findings

First quantitative question. RQ1: What is the degree of coherence between reading-policy guidelines to teach reading using evidence-based curriculums and the curriculums implemented in 16 small rural school schools in Connecticut?

Descriptive statistical results drawn from document analyses revealed that the reading curriculums implemented in 16 small rural schools in northwest Connecticut (0%-62.8%) varied in degree of alignment with rigorous research evidence and reading-policy guidelines to implement evidence-based reading curriculums. Quantitative results drawn from the document
analysis informed purposive selection of four extreme deviant-case schools from the 16 small rural schools for follow-up observations of reading instruction. The first two schools selected used combinations of reading curriculums to achieve the highest degree of reading-policy coherence. The other two selected schools used combinations of curriculums to achieve the lowest degrees of reading-policy coherence.

**Second quantitative question.** RQ2: What is the degree of coherence between reading-policy guidelines to teach reading using scientifically-based reading instruction and reading-instruction practices institutionalized in 16 small rural school schools in Connecticut?

Descriptive statistical results drawn from coded observations of reading instruction revealed that the reading-instruction practices in the four purposively selected small rural schools (33.2%–64.8%) varied in degree of alignment with rigorous research and policy guidelines to implement scientifically-based reading instruction. Quantitative results drawn from observations informed purposive selection of two extreme deviant-case schools from the four observed schools for follow-up interviews. The first school selected used a combination of reading curriculums and instructional approaches to achieve the highest degree of reading-policy coherence, designated as the positive extreme deviant case. The second school used a combination of reading curriculums and instructional approaches to achieve the lowest degree of reading-policy coherence, designated as the negative extreme deviant case. Quantitative results also informed the development of the interview protocol used in the second qualitative phase.

**Review of the Qualitative Findings**

The second qualitative phase of the study analyzed two distinct datasets. One data set emerged from interviews conducted in the negative extreme deviant case and the second data set emerged from interviews conducted in the positive extreme deviant case. Within-case thematic
analysis of interviews with superintendents, principals, literacy leaders, and first-grade and kindergarten teachers were conducted to answer three qualitative questions.

Central qualitative research question. RQ3: How do district leaders, principals, literacy leaders, and teachers explain variations in coherence between reading-policy guidelines and reading-instruction practices?

Negative-case explanations for low policy coherence. The qualitative findings revealed how district leaders, principals, literacy leaders, and teachers explain variations in coherence between reading-policy guidelines and reading-instruction practices in each deviant case. In the negative case, explanations for low reading-policy coherence emerged from external and internal perspectives. From a perspective outside of the negative-case school, the superintendent offered three explanations for low reading-policy coherence: failure of district and school leaders to require reading-policy coherence, resistance at the school board and the principal level, and Dunning–Kruger bias at the teacher level. Table 40 presents each of the superintendent's explanations for low policy coherence with verbatim illustrative quotations.

Table 40
Superintendents’ Explanations for Low Policy Coherence

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Illustrative Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure of district and school leaders to require policy coherence</td>
<td>“For years, unfortunately…there hasn’t been an emphasis on best practices. Everybody’s been allowed to do whatever each classroom thought was best practice…It’s not just that there’s a difference between one school and another, even in each of the schools, things aren’t being done the same way. You can walk into one classroom, and one program is being used with emphasis, and something different [is used] in another.”</td>
</tr>
<tr>
<td>Resistance at the board and the principal level</td>
<td>“Each school has been so autonomous and principals are almost like in their own domain. They answer to their board. And central office has always kind of been considered …that’s who you go to if you have a policy question. That’s it. But they say, we as principals are going to run our schools the way we want, and we’re saying, you know, you manage schools, you’re the instructional leader, but we’re going to be doing the same thing as a region.”</td>
</tr>
<tr>
<td>Dunning–Kruger bias at the teacher level</td>
<td>“I would say one of the things is just the old habits of the staff, the way they’ve always done things and they feel it’s effective. They don’t see a need for change.”</td>
</tr>
</tbody>
</table>

*note.* This response implies that failure to implement effective reading instruction emerges from ignorance, or a deficit of knowledge, and Dunning-Kruger bias, or an inability to detect ignorance (Dunning, 2011; Kruger & Dunning, 1999).
From a perspective inside the negative-case school, the principal, literacy leader, and teachers shared sensemaking accounts to rationalize and justify their inability to attain reading-policy coherence. Accounts included economic hardship, the interaction between students’ deficits and unrealizable reading-policy standards, and claiming that the imposed reading policy threatens existing effective reading-instruction practices. Table 41 presents principal, literacy leader, and teachers’ shared sensemaking accounts to explain low policy coherence with verbatim illustrative quotations.

Table 41

<table>
<thead>
<tr>
<th>Account</th>
<th>Illustrative Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic hardship</td>
<td>Superintendent: “So we can’t say it’s because we don’t have the resources…Overall, our cost per pupil in all of our six schools…ranges anywhere between $23,000 per student and $34,000 per student [and at $34,000 [one of our schools] has the highest per pupil cost of any school in Connecticut.”</td>
</tr>
<tr>
<td>Accounts of economic hardship were shared to explain that shortfalls in resources and opportunities prevent reading-policy coherence.</td>
<td><strong>important to note:</strong> the National Center for Educational Statistics reports that in the 2019–2020 school year, per pupil spending in the negative case school was $37,013. Of the 522 elementary schools in Connecticut, the negative case school had the fifth-highest per-pupil expenditure. Principal: “This town is extremely frugal with how it spends its money. So if I’m going to spend its money-I better make really sure that what I’m purchasing has meaning and is really important and is being done for a really solid reason and can actually produce results.” Literacy Leader: “Lack of resources is a big reality for me…I do sometimes find it challenging to provide the best amount of support due to the lack of resources this school has…because of funding. And while we are not often denied professional development. We are not always, and I don’t want to say we’re afraid to ask, but we know that funds are tight.” Kindergarten Teacher: “I think budget is a huge factor, with staffing, with intervention, with…being current, supplies that are current, I mean, I know that we have books in the other room that are older than me, and, you know, I’m not 20 anymore … so it’s kind of scary.”</td>
</tr>
<tr>
<td>Student deficits</td>
<td>Principal: “It’s a beautiful setting, but it’s like [an impoverished inner city in Connecticut]. It’s got an urban mentality in a rural setting…and it’s got all of the things that go with that. And so I think when it comes to curriculum, you’ve really got to look at the kids you’re teaching.” First grade teacher: “One school is listened to heavily, it is the…favorite school in this region. It has the highest test scores. Not necessarily because the teachers are more effective but because of their population.” Kindergarten teacher: “So I’m not sure that I completely agree with it [policy]. I understand why we’re moving in that direction. But I’m not sure that, like in my deep heart, I agree with it… because I’m not sure that some of these, especially I have some little males in my class, that are just not developmentally there…and we all know that not all of those skills can be met in every single child developmentally.”</td>
</tr>
<tr>
<td>Accounts of student deficits were shared to explain that it is not possible to meet rigorous policy standards considering student, family, and community challenges.</td>
<td>Principal: Principal: “At this point, I have no intentions of changing that [reading instruction]. I’ve been under a lot of fire to change it over to this thing, or that thing, or whatever in the past year and a half.” Principal: “I’m not in the mood to really want to shift [current reading instruction logic] at this point because I know that it’s working.” First grade teacher: “In here? I think we would probably try to comply. I would be sick, but we have separate boards and I don’t think our board would make us do that.” First grade teacher: “I just find like the phonological piece is so important to [recently trained] teachers. They go right to phonics, and they’re not building [the foundation]. Its driving me nuts!” Kindergarten teacher: “I do think that kids amazingly are able to learn to read with a variety of different strategies.”</td>
</tr>
</tbody>
</table>
Positive-case explanations for high policy coherence. In the positive-case school, explanations for a high level of coherence between reading-policy guidelines and reading-instruction practices emerged from two consolidated sensemaking accounts shared across all systems levels. The first account was that high policy coherence emerged from leader mediation through sensegiving. The second account was that educators conducted ongoing collaborative cocreation to recombine meaning- and code-emphasis logics into a hybrid balanced reading-instruction logic. Table 42 presents principal, literacy leader, and teachers’ shared sensemaking accounts to explain high policy coherence with verbatim illustrative quotations.
Table 42

Principal, Literacy Leader, and Teacher Sensemaking Accounts to Explain High Policy Coherence

<table>
<thead>
<tr>
<th>Account</th>
<th>Illustrative Examples</th>
</tr>
</thead>
</table>
| Leader mediation through sensegiving        | Principal: “I do a lot online just to make sure I’m understanding what policy is…because I have to understand that to bring it to my teachers and make sure they understand.”  

  “Absolutely, go deeper in so help them understand.”  

  “I would have all there, all people involved, but then I would definitely meet in small groups through our PLCs…one on one teacher meetings. So I would have, you know, make sure I go over it so they understand what has come trickled down so that there’s no, you know sometimes policies can be negative to a teacher, like “ugh, something else.” They’ve brought us something else. So I try to keep a very upbeat, how it can help them inform their instruction help to learn about, their students better things like that.”  

  “It depends on where they are in their teaching career as well. That pendulum, policies tend to sometimes come back, things of that sort. But it depends on where they are. I don’t find it the same for all.”  

  Principal: “We are training our teachers in Orton Gillingham practice. So we’re really giving them those foundations. My big thing…is that you cannot build a foundation out of sand. Because it’ll look great for a little while and then it’s going to crumble.”  

  Literacy Leader: “So we actually were trained, we had a group of teachers initially trained, three, four years ago. So we’re certified. So I was one of them and two special ed teachers were also certified. And then from the other schools [in the region]. It was like a cohort, we were together and we were trained and then we decided that it was like a worthy program and we piloted it for the following year for the whole district. So our PD money was all invested into this training, but it was more, it wasn’t like hands on, it was more of just the research and so now we’re investing more time with expert [practitioners]. So some people have moved on past a certification and are kind of coaches. So that’s where we’re at right now.”  

  We have a first grade teacher…she was trained initially with me. So…we consider her one of the experts in the OG model and another first grade teacher may come and just watch her workshop to see how she’s implementing or I may go over and watch the special ed teacher that had more training.”  

  “And we have some, a couple of teachers that have been here a long time, it was a hard time to get them to really buy into the curriculum …. I know you still want to use the basal readers…but, Calkins is our curriculum and we are to abide by that…so just working together and I think having the opportunity to meet with teachers and go through different units…so I’m actually doing that.”  

  “What’s nice is we’re also able to go to other schools [with] something that we feel like an expert [in] at this point.”  

  First grade teacher:  

  Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a policy that came down, or is that something that emerged from your school team?”  

  First grade teacher: “Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades…”  

  Kindergarten teacher: “I really appreciate that they are viewing the research sources they have within the district as valuable and important. And so we’re using each other for our professional development with a sprinkling of outside site stuff as needed. But I really love that.”  

| Collaborative cocreation | “Collaborative cocreation is a process whereby “agents engage in ongoing negotiations, experimentation, competition, and learning, which resolves over time into shared conceptions of problems and solutions” coalescing in the “development until a common template becomes diffused.””  

  Zietsma, & McKnight, p. 144, 2009 | Principal: “In first grade teacher:  

  Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a policy that came down, or is that something that emerged from your school team?”  

  First grade teacher: “Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades…”  

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  Collaborative cocreation is a process whereby “agents engage in ongoing negotiations, experimentation, competition, and learning, which resolves over time into shared conceptions of problems and solutions” coalescing in the “development until a common template becomes diffused.””  

  Zietsma, & McKnight, p. 144, 2009 |

First Qualitative Subquestion

RQ4: How do district leaders, principals, literacy leaders, and teachers describe reading-instruction practice in context?

Descriptions of reading instruction in the negative-case school. The qualitative findings revealed how educators described reading instruction in context. In the negative-case school, individuals at all systems levels described reading-instruction practices inconsistently.
Various reading-instruction logics described included the *Units of Study* (Calkins et al., 2015), a meaning-emphasis approach provided for student in kindergarten through second-grade, a code-emphasis approach reserved as an intervention provided to a small number of struggling students who failed to acquire meaning-emphasis skill by the end of second grade, basal readers, guided reading, and balanced instruction featuring a mix of meaning- and code-emphasis instruction.

The superintendent described inconsistent reading-instruction practices as inefficient. Despite inconsistencies, the principal, literacy leader, and teachers described reading-instruction practices as efficient. Table 43 presents the superintendent, principal, literacy leader, and teachers’ descriptions of reading-instruction practices in context with verbatim illustrative quotations.

**Table 43**

*Negative-Case Description of Reading-Instruction Practices With Verbatim Illustrative Quotations*

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superintendent</td>
<td>“It’s not just that there’s a difference between one school and another, even in each of the schools, things aren’t being done the same way. You can walk into one classroom, and one program is being used with emphasis, and something different [is used] in another. No alignment whatsoever.”</td>
</tr>
<tr>
<td>Principal</td>
<td>“I feel very good about the reading curriculum that we have at this school, we use the Columbia Teachers Writing College Curriculum.”</td>
</tr>
<tr>
<td>Literacy leader</td>
<td>“But regarding their classroom instruction, I think every teacher teaches it [reading] differently. Some use a workshop model, some use guided reading instruction, and I just kind of, when I’m supporting in the classrooms, kind of learn and do what works best for them [teachers].”</td>
</tr>
<tr>
<td>First grade teacher</td>
<td>“You know basically in this school, we don’t have a program, in K–2, we use the Columbia reading and writing model, and then in third grade they use the Engage New York ELA modules.”</td>
</tr>
<tr>
<td>Kindergarten teacher</td>
<td>“I happen to like the rules of the phonics and I think that might be something that we could incorporate more. I know this is where my co-teacher and I disagree. I really like Fundations and things like that. She really…doesn’t care for it. She feels like it’s very boring and it’s an intervention.”</td>
</tr>
</tbody>
</table>

**Descriptions of reading instruction in the positive-case school.** In the positive case school, participants described reading-instruction practices consistently at all systems levels, yet, agreement with the approach was inconsistent. The literacy leader, first-grade, and kindergarten teacher accounts echoed the principal’s description of reading-instruction practices as historically aligned with a specific way to teach reading informed by the *Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching* (Fountas & Pinnell, 2017) using the
*Units of Study* (Calkins et al., 2015), and an Orton Gillingham approach to reading instruction (Gillingham & Stillman, 1997). The superintendent expressed inconsistent agreement with the approach, stating, “I think, unfortunately that there is a belief out there that there is one way to teach reading. … This is all nonsense because you can use any curriculum.” Also inconsistent, the kindergarten teacher stated, “I defer [to policy] with some tweaks here and there, I defer.”

Significantly, however, neither the superintendent nor the kindergarten teacher interfered with implementation of the approach. The kindergarten teacher’s commitment to defer to policy was captured through the interview and in observations of reading-instruction practices. The superintendent expressed a refusal to interfere with the reading-instruction approach: “as six-figure employees, principals need to be charged to do their jobs. So I don’t try to micromanage. … I just give them enough rope to prove their point or mine.”

**Second Qualitative Subquestion**

RQ5: How do district leaders, principals, literacy leaders, and K–1 teachers disclose where complexity (conflicting logics) is located?

**Location of complexity in the negative-case school.** The qualitative findings identified the location of complexity in the two deviant cases. In the negative-case reading-instruction culture, complexity between the imposed logic of effective reading instruction and locally institutionalized reading-instruction practices was located at all systems levels. Complexity emerged in a top-down macroprocesses, the district imposed reading policy onto the school. Complexity also emerged in mesolevel processes across classrooms and grades. Finally, complexity arose in microlevel processes in individual relationships between the two kindergarten, first, and second-grade coteachers. Table 44 presents the superintendent, principal,
literacy leader, and teachers’ descriptions that disclosed the location of complexity in the negative case with verbatim illustrative quotations.

Table 44

Negative-Case Descriptions That Disclosed the Location of Complexity

<table>
<thead>
<tr>
<th>Role</th>
<th>Location of complexity: Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superintendent</td>
<td>Complexity emerged between policy and school’s written policies. “I started realizing the policies in our all of our schools were dating back 20–25 years and they might be revised, but they weren’t they weren’t congruent. They were incongruent with law.”</td>
</tr>
<tr>
<td>Principal</td>
<td>Complexity also emerged between the superintendent’s imposed logic of more effective reading instruction and the principal and veteran teacher assertions that the prevailing reading-instruction logic is already effective. “At this point, I have no intentions of changing that [reading instruction]. I’ve been under a lot of fire to change it over to this thing, or that thing, or whatever in the past year and a half. And this is not broken. At this point, I don’t really see a need to fix it. At this point…when you’re getting the results that you’re getting and you’ve got students that are really growing. At this point, I sort of fail to see the necessity to completely rip the thing out of the ground by the roots…and change it”</td>
</tr>
<tr>
<td>Literacy leader</td>
<td>Further, complexity was revealed in the literacy leader’s struggle to support K–5 teachers and students in classrooms featuring various reading-instruction logics. “So my role is supporting those students who are having difficulty reading in the classroom. But regarding their classroom instruction, I think every teacher teaches it differently. Some use workshop model, some use guided reading instruction, and I just kind of, when I’m supporting in the classrooms, kind of learn and do what works best for them [teachers].”</td>
</tr>
<tr>
<td>Kindergarten and first grade teachers</td>
<td>Finally, complexity was exposed between the meaning-emphasis reading-instruction logic of the veteran K–2 co-teacher and the attempts of a more recently trained K–2 co-teacher to blend code- and meaning-emphasis instruction. “I happen to like the rules of the phonics and I think that might be something that we could incorporate more. I know this is where my co-teacher and I disagree. I really like Fundations and things like that. She really…doesn’t care for it. She feels like it’s very boring and it’s an intervention.”</td>
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</table>

Location of complexity in the positive-case school. During the time of the interviews, complexity was isolated to one system level in the positive-case reading-instruction culture. Complexity emerged between the imposed code-emphasis reading-instruction logic and the existing meaning-emphasis reading-instruction logic of veteran teachers. Descriptions also revealed, however, that complexity was greater in the past and was resolving over time. An example arose in the first-grade teacher’s statements: “I feel like this year … we’re all on the same level. You know, I feel like we’re all thinking the same thing [and] that we’re all like expecting the same thing,” and
When I first started, eight years ago, it [the school’s reading logic] was … whole language and … I was like this is crazy, like they don’t even know their alphabet … yet, I have to do that [whole-language instruction] first. Yeah … it was difficult.

Table 45 presents the superintendent, principal, literacy leader, and teachers’ descriptions that disclosed the location of complexity in the positive case with verbatim illustrative quotations.

Table 45

*Positive Case Descriptions That Disclosed the Location of Complexity*

<table>
<thead>
<tr>
<th>Role</th>
<th>Location of complexity: Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superintendent</td>
<td><em>Note.</em> Complexity also emerged between the superintendent’s logic that there “is not one way to teach reading” and the principal’s account of specific way to teach reading. In the end, however, the superintendent expressed but did not impose his reading-instruction logic. The complexity between the superintendent and the principal remained part of a private exchange between the superintendent and myself and therefore did not impact the school’s reading-instruction culture.</td>
</tr>
<tr>
<td>Principal</td>
<td>“It depends on where they are in their teaching career as well. That pendulum, policies tend to sometimes come back, things of that sort. But it depends on where they are. I don’t find it the same for all.”</td>
</tr>
<tr>
<td>Literacy leader</td>
<td>“We have some, a couple of teachers that have been here a long time. It was a hard time to get them to really…buy into the curriculum. I feel like there’s some confusion about like is this our curriculum or is this not our curriculum.”</td>
</tr>
<tr>
<td>First grade teachers</td>
<td>“Before maybe one teacher, it might not work for their classroom, they’re doing this approach or no, they can’t do, or they they’re not willing to maybe make the change, or they’re stuck in their own ways. So, at times …I’m always like the cheerleader…we’ll just try it. You know, let’s try, or let me show you some strategies or…show me some strategies that you’re doing.”</td>
</tr>
<tr>
<td>Kindergarten teacher</td>
<td>“We have a really cohesive grade level. Really special where we all work well together and have a similar respect for each other, not necessarily all the exact same ideas or approach.”</td>
</tr>
<tr>
<td></td>
<td>“There are some times when…our curriculum coordinator will bring in new ideas with her interpretation or what she’s seen at a different school that doesn’t match. And there’s a struggle with that.”</td>
</tr>
</tbody>
</table>

**Mixed Method Research Questions**

The mixed methods analysis integrated qualitative and quantitative results by merging them in joint displays to facilitate cross-case analysis to answer three mixed methods research questions.

**First mixed method research question.** RQ6: How do district leader, principal, literacy leader, and teacher descriptions of reading-instruction practices in context compare to one another?

Merging quantitative and qualitative results facilitated a comparison of descriptions of reading-instruction practices in the two deviant cases. Side-by-side comparison of the
superintendent, principal, literacy leader, and teacher descriptions of reading-instruction practices in the positive and negative cases revealed differences in reading-instruction practices. Descriptions drawn from negative-case interviews revealed that reading-instruction practices were inconsistent across classrooms and grades. In contrast, descriptions drawn from positive-case interviews revealed that reading-instruction practices were consistent across classrooms and grades. Table 46 presents a joint display to facilitate a side-by-side comparison of negative- and positive-case descriptions of reading-instruction practices with verbatim illustrative quotations.

**Second mixed method research question.** RQ7: How do district leaders’, principals’, literacy leaders’, and teachers’ disclosure of where complexity is located compare to one another?

Superintendents’, principals’, literacy leaders,’ and teachers’ descriptions of their lived experiences and circumstances disclosed the locations of complexity in the negative and positive cases. Comparing the disclosure of complexity across cases revealed that in the negative case, complexity was present at all systems levels. In the positive case, complexity was limited and disclosed between the imposed code-emphasis reading-instruction logic and the meaning-emphasis logic of veteran teachers. Table 47 presents a joint display with a side-by-side comparison of the location of complexity in the two extreme cases.
Finally, complexity was revealed in the literacy leader’s struggle to assert the prevailing reading logic of the veteran K teacher. Complexity also emerged between the first grade teacher’s imposed logic that reading instruction was historically aligned with a single instructional approach, the Lucy Calkins Units of Study for Teaching Reading (Calkins et al., 2015), and an Orton Gillingham approach to reading instruction (Gillingham & Stillman, 1997). Complexity was disclosed at all systems levels in the negative case school, reading-instruction practices are described inconsistently by individuals at all systems levels. Various reading-instruction logics described include Teachers College Reading and Writing Project: Units of Study for Teaching Reading (Calkins et al., 2015), early literacy groups (Canady & Canady, 2012), EngageNY English Language Arts Units (EngageNY, 2016), a meaning-emphasis approach provided in kindergarten through second-grade students, a code-emphasis approach reserved as an intervention provided to a small number of struggling students who failed to acquire meaning-emphasis skill by the end of second grade, basal readers, guided reading, and balanced instruction featuring a mix of meaning- and code-emphasis instruction.

For example, the district superintendent observed, “It’s not just that there’s a difference between one school and another, even in each of the schools, things aren’t being done the same way. You can walk into one classroom, and one program is being used with emphasis, and something different is used in another.”

Yet, the principal represented reading instruction as historically aligned with a single instructional approach, the Lucy Calkins Units of Study for Teaching Reading (Calkins et al., 2015). Misaligned with the principal’s framing, however, the literacy leader observed, “But regarding their classroom instruction, I think every teacher teaches it [reading] differently. Some use a workshop model, some use guided reading instruction, and I just kind of, when I’m supporting in the classrooms, kind of learn and do what works best for them [teachers].”

Similarly, the first grade teacher stated, “You know basically in this school, we don’t have a program, in K-2, we use the Columbia reading and writing model, and then in third grade they use the Engage New York ELA modules.”

Further similar, the kindergarten teacher recounted, “I happen to like the rules of the phonics and I think that might be something that we could incorporate more. I know this is where my co-teacher and I disagree. I really like Fundations and things like that. She really…doesn’t care for it. She feels like it’s very boring and it’s an intervention.”
Third mixed method research question. RQ8: In what way does the qualitative data collected from interviews with district leaders, primary school principals, literacy leaders, and K–1 teachers explain the degree of coherence between reading-policy guidelines and institutionalized reading-instruction practices in 16 small rural schools in Connecticut?

Within-case analysis revealed two broad themes common to both cases that explain variations in degrees of reading-policy coherence, sensemaking, and institutional work. Although the two broad themes were common across cases, the aim of sensemaking and institutional work and the emergent codes representing microfoundational processes embedded under themes were not common across cases. In the negative case, leaders drove sensemaking and were defensive. Codes embedded under the theme **defensive sensemaking driven by leaders** included **belief that meaning-emphasis reading instruction is legitimate, deficit thinking, Dunning–Kruger bias, and a mindset of economic hardship.** In the negative case, institutional work aimed at buffering and maintaining existing institutional arrangements. Codes embedded under the theme **institutional work aimed at maintaining existing institutional arrangements** included **entrepreneurship concerned with maintaining institutions, fabrication, oppositional autonomy, and resistance.**

In the positive case, leaders also drove sensemaking but it was collaborative. Codes embedded under the theme **collaborative sensemaking driven by leaders** included **autonomous reflexivity, the belief that reading is the product of decoding and comprehension, and leader sensegiving.** In the positive case, institutional work was aimed at reconciling imposed and local reading-instruction logics. Codes embedded under the theme **institutional work aimed at reconciliation** included **collaborative cocreation** and **cultural entrepreneurship.**
Codes and themes linked to each case were organized in joint displays to facilitate cross-case analysis. Two metainferences emerged from mixed methods cross-case analysis to explain degrees of coherence in each extreme deviant case. In the negative case, microfoundational processes emerged from complexity, coalesced to reject the imposed reading-instruction logic to protect the local reading-instruction logic, and in the end, reproduced complexity. In contrast, in the positive-case reading-instruction culture, microfoundational processes also emerged from complexity but coalesced to reconcile conflicting logics by recombining the imposed and local reading-instruction logics into a new hybrid logic, and in the end, resolved complexity.

**Insights and Practical Implications**

This mixed methods comparative case study was complex. Researchers use complex comparative case studies to “compare cases along quantitative or qualitative dimensions to portray variation in how the cases provide insight about the problem studied” (Creswell & Plano Clark, 2017, p. 119). Advantages realized in complex case studies include that they are useful in understanding the complexity of systems, and “developing in-depth, practical understandings and conclusions that are particularized and transferable” (Creswell & Plano Clark, 2017, p. 118). The previous sections of this chapter are organized to allow the reader to develop deep understandings of the two cases. Multiple individual insights and associated practical implications emerged from consideration of the microfoundational processes underlying reading-policy coherence in the negative- and positive-case schools. The next section details insights and practical implications relative to the audience: reading-policy mediators.
Insight 1: Institutionalized Logics Matter

Discussion. In reading-instruction cultures, individuals are embedded in a dominant reading-instruction logic (Thornton et al., 2012). Institutional logics are the “socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton & Ocasio, 2008, p. 101). Dominant reading institutional logics act as frames of reference (Thornton et al., 2015) and infuse literacy educators’ taken for granted values, beliefs, and practices (Woulfin, 2016). In the negative and positive cases, complexity emerged from the imposition of a competing reading-instruction logic—effective reading instruction—onto a local dominant reading-instruction logic: meaning-emphasis reading instruction. Organizational responses to complexity included processes to decouple, negotiate, or strategically couple competing logics (e.g., Pache & Santos, 2013).

First-phase quantitative results revealed extreme deviant cases, each with a different degree of coupling between the logic of an authoritative system, reading policy, and the logic of a technical system: reading instruction. Degrees of coupling between two systems rest on the number of variables shared across systems (Glassman, 1973). Reading-instruction practices in the negative case shared fewer variables with reading-policy guidelines, suggesting that the negative case was more loosely coupled. In contrast, reading-instruction practices in the positive case shared more variables with reading policy, suggesting the positive case was more tightly coupled.

Before the NCLB (2001) policy goal to provide equitable access to effective reading instruction, both the positive and negative cases conformed to a meaning-emphasis reading-instruction logic. Central to NCLB was a new reading-instruction logic: effective reading
In response to NCLB reading-policy guidelines, the two cases engaged in different processes to achieve different goals. In the negative case, the principal engaged in buffering to decouple or separate and protect the local dominant logic—meaning-emphasis reading instruction—from the imposed effective reading-instruction logic. In the positive-case school, the principal engaged in brokering and led the reading-instruction culture to recombine the local dominant logic—meaning-emphasis reading instruction—with the imposed effective reading-instruction logic to develop a new hybrid balanced reading-instruction logic.

**Negative-case buffering activities.** Buffering is a tactical leadership practice used by principals to protect educators from “adverse effects of external influences, such as policy mandates and district demands” (LeChasseur, Donaldson, Fernandez, & Femc-Bagwell, 2018, p. 264). Buffering activities include policy resistance to shield teachers and to reject practice expectations perceived as inefficient, threatening to teacher quality, or to promote uncertainty (LeChasseur et al., 2018). In the negative case, buffering was evident in the principal’s statement.

At this point, I have no intentions of changing that [reading instruction]. I’ve been under a lot of fire to change it over to this thing, or that thing, or whatever in the past year and a half. And this is not broken. At this point, I don’t really see a need to fix it. At this point … when you’re getting the results that you’re getting and you’ve got students that are really growing. At this point, I sort of fail to see the necessity to completely rip the thing out of the ground by the roots … and change it.

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17 Effective reading instruction concurrently incorporates two interrelated sets of skills: foundational reading skills and reading-comprehension skills (Foorman et al., 2016). Foundational reading skills include phonemic awareness, phonemic decoding skills, fluency in word recognition and text processing, oral-language vocabulary and skills, and spelling and writing skills (Foorman et al., 2016; NRP, 2000). Comprehension skills are undergirded by foundational reading skills and include broad conceptual knowledge, text-comprehension skills, thinking and reasoning skills, and motivation and engagement (Shanahan et al., 2010).
**Negative-case decoupling.** Decoupling occurs under conditions of competing institutional logics and describes a process whereby organizations symbolically endorse one logic to maintain legitimacy while enacting another logic (Meyer & Rowan, 1977). Decoupling is more likely to happen when the logic of an imposed policy conflicts with a locally institutionalize logic (Boxenbaum & Jonsson, 2008). Decoupling is defensive or strategic. Defensive decoupling maintains internal efficiency (Boxenbaum & Johnson, 2008). Strategic decoupling manages external impressions to attain or protect legitimacy (Elsbach & Sutton, 1991). In the short-term, decoupling reduces threats to legitimacy (Boxenbaum & Johnson, 2008). Over time, however, decoupling may be exposed under scrutiny, and the misalignment between normative and operational structures may cause conflict between constituents that erodes organizations (Pache & Santos, 2013). Evidence of symbolic endorsement of an effective reading-instruction logic was found in the principal’s representations:

> And it’s really intensive and they’re well trained. … But, so I feel that our phonics, all of that. All of that granular baseline work here is pretty strong. Its intensive. … And, central office really doesn’t have a problem with our reading program the way that we’re doing it. … The jumps that they take in this program are phenomenal, I mean it’s amazing and with that being really, really strong and outcomes and they all really learn to read well!

**Positive-case brokering activities.** Brokering involves “strategies to mediate conflict among contradictory messages about what is most important and finding solutions that serve multiple purposes” (LeChasseur et al., 2018, p. 263). Brokering activities coordinate policy, school goals, and instructional practices (Elmore, 2000). Brokering activities include crafting coherence between competing policy and practice logics (Honig & Hatch, 2004) and sensegiving to mediate complexity (Maitlis & Christianson, 2014). In the positive case, brokering was evident in the principal’s statement.
I would have all there, all people involved, but then I would definitely meet in small groups through our PLCs … one on one teacher meetings. So I would … make sure I go over it so they understand what has … trickled down so that there’s no, you know sometimes policies can be negative to a teacher, like “ugh, something else.” They’ve brought us something else. So I try to keep a very upbeat, how it can help them inform their instruction [and] help them to learn about their students better.

**Positive-case recombination activities.** Recombining occurs under conditions of competing internal logics as organizations attempt to reconcile complexity through a process of selective coupling to achieve selective isomorphism (Pache & Santos, 2013). Selective coupling refers to “the purposeful enactment of selective practices among a pool of competing alternatives” (Pache & Santos, 2013, p. 994). Strategic isomorphism describes an organization’s recombination of intact elements drawn from both logics (Tracey, Phillips, & Jarvis, 2011) to create rather than adopt a logic leading to legitimacy (Aurini, 2006). Recombining established logics eliminates organizational complexity.

**Lessons learned.** Reading-policy coherence may be diminished in cases where educators perceive reading policy as threatening to the efficiency and legitimacy of a dominant reading-instruction logic. As a result, the imposed reading-policy logic may be buffered, wholly rejected, and decoupled from the local dominant reading-instruction logic. Under conditions of decoupling, organizational constituents possess varying allegiance to the locally and externally legitimized reading-instruction logics, and complexity may emerge between individuals and groups with divergent allegiances.

Reading-policy coherence may be enhanced in cases where educators perceive reading policy as a guide to increasing the efficiency and legitimacy of a dominant reading-instruction logic. Comparing an imposed reading-policy logic with an existing reading-instruction logic may reveal practice gaps that threaten efficiency and legitimacy. Recombining intact elements from
the imposed logic to backfill gaps in the dominant logic may create a hybrid logic more coherent with the imposed reading-policy logic.

**Practical Implications**

Practical implications include the following:

1. Broker reading policy with respect for the dominant reading-instruction logic and a goal to recombine intact elements from the dominant and imposed reading-instruction logics.

2. Mobilize resources and efforts to recruit and retain literacy leaders and educators free from allegiance to one reading-instruction logic over another.

3. Develop a strong identity for the hybrid logic as legitimate to reduce perceived competition between logics.

**Insight 2: Principals’ Knowledge of the Science of Reading Matters**

**Discussion.** The science of reading includes knowledge drawn from empirical evidence of the components of effective reading instruction and how reading develops and should be taught. Principals’ knowledge of the science of reading influences how they perceive classroom reading-instruction practices, provide teacher feedback (B. S. Nelson & Sassi, 2000), and structure professional development (Burch & Spillane, 2003). Principal’s knowledge of the science of reading influences reading-policy interpretation, the reading-policy messages emphasized, sensegiving and meaning-making, how they shape teacher learning opportunities, and the degree of reading-policy coherence (Coburn, 2005). Teachers report that they develop and implement effective reading-instruction practices resulting in improved reading-achievement outcomes when principals possess and share expert knowledge of the science of reading through conversations, modeling effective instruction, observations and feedback, collaboration during
professional development, and clear evidence-based decisions and policies (Kindall, Crowe, & Elsass, 2018).

**Negative case.** In the negative case, several findings suggested the principal lacks expert knowledge of the science of reading. First, the principal endorsed and protected reading instruction that prioritized a meaning-emphasis approach. Second, professional development in the science of reading was absent. Third, reading achievement outcomes rank in the bottom 50% in the state. Finally, the principal’s represented of meaning-emphasis reading-instruction as effective:

> I feel that our phonics … all of that granular baseline work here is pretty strong. Its intensive. … The jumps that they take in this program are phenomenal, I mean it’s amazing and with that being really, really strong and outcomes and they all really learn to read well!

**Positive case.** In the positive case, several findings suggested that the principal has and shares expert knowledge of the science of reading. First, the principal endorsed and cultivated balanced reading instruction and prioritized code-emphasis instruction. Second, professional development in code-emphasis skills is ongoing. Third, reading achievement ranks in the top 30% in the state. Finally, the literacy leader and teachers described the principal’s expert knowledge of the science of reading. For instance,

> Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a top-down policy … or is that something that emerged from your school team?”

> First grade teacher: “Emerging from our school team, and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty.”

**Lessons learned.** Reading-policy coherence may be enhanced in cases where the principal possesses and shares expert knowledge of the science of reading.
Practical Implications

1. Hire elementary principals with expert knowledge of the science of reading.
2. Assess in-service principal knowledge of the science of reading.
3. In response to assessment outcomes, create precisely individualized opportunities to increase principal knowledge of the science of reading.
4. Absent principal knowledge of the science of reading, hire a reading expert to oversee reading-policy interpretation, reading-policy sensegiving, internal and external professional development, creating conditions for teacher learning in school, and to model, observe, and evaluate reading instruction.
5. Require principals to prioritize ongoing professional development in the science of reading early in scheduling and budgeting processes.
6. Require principals to participate in all reading professional development.

Insight 3: Leader Sensegiving Matters

Discussion. Leader sensegiving is the process of “attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442). Principals engage in sensegiving to influence teachers’ enactment of reading policy by “shaping access to policy ideas, participating in the social processes of meaning-making, and creating substantively different conditions for teacher learning in schools” (Coburn, 2005, p. 477). Four patterns of sensegiving—guided, fragmented, restricted, and minimal—differentially influence sensemaking processes, and accounts, and inform actions (Maitlis, 2005). Guided sensegiving is controlled and animated, delivered in planned, structured, and engaging meetings with the entire organization. Guided sensegiving elicits a rich, unified account that acts as a frame of reference for a series of
consistent actions. Fragmented sensegiving is animated but not controlled, and delivered in unplanned social gatherings with a segment of the organization. Fragmented sensegiving triggers the construction of narrow accounts and a series of inconsistent actions. Restricted sensegiving is controlled but not animated and delivered in planned meetings to issue directives to the entire organization. Restricted sensegiving prompts the construction of one narrow account and a one-time action as an act of compliance. Minimal sensegiving is neither controlled nor animated and occurs when a segment of the organization ambushes the leader. Minimal sensegiving results in low levels of engagement and perhaps a one-time act of compliance. The quality and success of leader sensegiving varied across cases.

**Negative-case sensegiving.** In the negative case, leader sensegiving was focused externally and aimed at decoupling imposed and locally institutionalized reading-instruction logics. Acting as an institutional entrepreneur concerned with maintaining institutional arrangements, the principal used “mechanisms of framing, categorization, and storytelling to silence antagonists, protect interests, and maintain the institutional order” (Zilber, 2007, p. 1049). Descriptions revealed two types of sensemaking accounts. The principal presented the first account, constructed strategically and disseminated tactically to manage external impressions of the existing reading-instruction logic as effective, contest the imposed reading-instruction logic, and vilify and reduce the power of proponents of the imposed reading-instruction logic. The principal’s statement provided evidence of sensemaking aimed at decoupling.

So formal meetings … it would be primary grades, I would pull my K–2 team or my k–4 team actually and pull them together and we would have a meeting after school and sit down and take a look at what the expectations were going to be, look at where we were on that continuum … is what we’re doing compliant? Is there anything that we have to do to our program to shift in any way? And if so, what are the pros and cons of that? What do we feel would be the best fit for our students to still stay in compliance?
The second account was shared internally and selectivity to blame children, families, communities, and circumstances for early reading failure. Principal, literacy leader, and teacher descriptions revealed sensemaking accounts constructed in disorganized factions, suggesting that leader sensegiving was minimal, fragmented, and disorganized. Absent a shared account of what reading instruction should look like, teachers and the literacy leader described the reading-instruction practices of colleagues as illegitimate. Finally, evidence of fragmented and minimal sensegiving emerged from observations, showing teachers’ planned and spontaneous reading-instruction actions were inconsistent.

**Positive-case sensegiving.** In the positive case, leader sensegiving aimed at reconciliation of the imposed and locally institutionalized reading-instruction logic. The principal acted as a cultural entrepreneur. Cultural entrepreneurs use mechanisms of framing, categorization, and storytelling to facilitate understanding, justification, and legitimation of an innovation (Lounsbury & Glynn, 2001). Evidence of guided sensegiving was disclosed in the principal’s statements.

[Regarding new policy initiative] I would have all there, all people involved, but then I would definitely meet in small groups through our PLCs, also through … one on one teacher meetings. So I would … make sure I go over it so they understand what has trickled down so that there’s no, you know sometimes policies can be negative to a teacher, like “ugh, something else.” They’d brought us something else. So I try to keep a very upbeat, how it can help them inform their instruction help to learn about, their students better, things like that. … [I] go deeper in so to help them [teachers] understand.

Two descriptions emerged from interviews suggesting that guided sensegiving was successful. First, the principal, literacy leader, and teachers repeated a singular shared sensemaking account of balanced reading instruction. Second, the literacy leader and teachers each described the principal’s sensegiving practices aligned with Maitlis’s (2005) description of guided sensegiving. Finally, evidence of successful guided sensegiving emerged from observations, as teachers’
consistent planned and spontaneous reading-instruction actions mirrored the sensegiving account.

**Lessons learned.** Reading-policy coherence may be diminished in cases where leader sensegiving is fragmented and aimed at decoupling local reading-instruction practice from the imposed reading policy. Fragmented sensegiving results in multiple narrow and individualized accounts. Because fragmented sensegiving is conducted in disorganized factions, individual accounts may not be integrated into a single unified account. Reading-instruction practices emerging from individual accounts may be inconsistent and internally contested.

Reading-policy coherence may be enhanced in cases where leaders conduct guided sensegiving aimed at achieving policy coherence. Guided sensegiving that includes leaders and all organization members may lead to the creation of a single unified account in alignment with policy. Reading-instruction practices informed by a single unified account coherent with policy may reflect policy goals.

**Practical implications.**

1. Intentionally influence where and when sensemaking happens.
2. Structure sensegiving in formal collaboration with all system members collectively.
3. Present and privilege a preferred sensemaking message.
4. Continually guide sensemaking in smaller, regularly scheduled interactions.
5. Plan guided sensegiving early in scheduling and budgeting processes.

**Insight 4: Steady Work Matters**

**Discussion.** Reading-logic transformation or maintenance requires steady ongoing work. Institutional work is the “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” (Lawrence & Suddaby 2006, p. 215). Interested actors
Institutional entrepreneurs engage in three types of work to create institutions; political work to redefine rules, property boundaries, and access to resources; change belief systems; and alter meaning-making systems (Lawrence & Suddaby, 2006, p. 221). Agents concerned with issues of efficiency engage in two types of work to maintain institutions: adherence to rules and systems and reproducing existing norms and beliefs (Lawrence & Suddaby, 2006, p. 230). Agents who disrupt institutions are described as institutional entrepreneurs or actors who use strategies to alter institutional arrangements rather than conforming to intuitional arrangements (Maguire, Hardy, & Lawrence, 2004). Institutional entrepreneurs engage in three types of work to disrupt institutions: changing rewards and sanctions; disassociating practices, rules, or technologies from their moral foundations; and undermining core assumptions and beliefs (Lawrence & Suddaby, 2006, p. 235–237).

**Negative-case work.** In the negative-case school, different types of work emerged at three systems levels: the district office, principal’s office, and classrooms. At the district level, the superintendent engaged in institutional entrepreneurship to disrupt and transform the negative-case reading-instruction logic. Institutional entrepreneurship involves the “activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones” (Maguire et al., 2004, p. 657).

Superintendent actions included work to redefine rules through the top-down impositions of an effective reading-instruction logic and mandates to conduct early literacy groups and regularly scheduled grade-level data meetings. Advanced training with outside experts in early literacy groups and innovative scheduling supported these mandates. Further support for mandates included guidance to exercise creative bricolage, including grant funds rededicated to floating
teachers to support innovative scheduling. School-level actors resisted the superintendent’s efforts.

The principal engaged in entrepreneurship aimed at maintaining institutions. Entrepreneurs concerned with maintaining institutions use mechanisms of framing, categorization, and storytelling to silence antagonists, protect interests, and maintain the institutional order (Zilber, 2007). Principal actions included confrontational and oppositional legitimacy politics to completely reject the imposed reading-instruction logic (Kraatz, 2009). Specific political actions included tactical dissemination of two sensegiving accounts, one directed at the school board, and a second directed at the community, parents, and teachers. In the account directed at the school board, the principal cast the existing meaning-emphasis reading-instruction logic as legitimate and the top-down imposition of an effective reading-instruction logic as a threat to the current institutional order and the school’s distinctive rural identity. In the second account, the principal cast the reading-instruction culture as cohesive, composed of well-trained expert teachers of reading, and reading-instruction practices as legitimate, effective, and yielding high levels of reading achievement. In the end, the principal’s actions vilified and reduced the power of the superintendent by creating contestation among the board, community, literacy educators, and the superintendent.

In classrooms, institutional work focused on maintaining efficiency, reproducing current reading-instruction practices. Work included a veteran teacher’s rejection of the imposed effective reading-instruction logic, evidenced by the kindergarten and first-grade teachers’ statements. A more recently trained kindergarten teacher said,

I happen to like the rules of the phonics and I think that might be something that we could incorporate more. I know this is where my co-teacher and I disagree. I really like
Fundations and things like that. She really … doesn’t care for it. She feels like it’s very boring and it’s an intervention.

During observations of reading instruction, the veteran first-grade teacher explained:

Next year, Fundations will be implemented in [all but one] elementary schools in the region. [the negative case school] will adopt Fountas and Pinnell instead. Fundations is a tier two intervention only necessary for a small number of struggling readers. It’s not for everyone.

Moreover, in consultation with the principal, the first-grade teacher framed the kindergarten teacher’s push to implement Fundations as a threat to existing practice. The kindergarten teacher shared the principal’s reaction, a plan to reduce the first-grade teacher’s role and influence in the following school year to protect existing reading-instruction practices.

**Positive-case work.** In the positive-case school, three types of work contributed to the development of a new reading-instruction logic. The principal acted as a bridging entrepreneur at multiple systems levels to achieve legitimation of the new reading-instruction logic. The principal, literacy leader, and teachers collaborated to create the new reading-instruction logic. Finally, the literacy leader and teachers engaged in a legitimation project to legitimize the innovation.

Bridging “involves an institutional entrepreneur combining aspects of established institutional logics and their associated practices and organizational forms to create a new type of organization underpinned by a new, hybrid logic” (Tracey, Phillips & Jarvis, 2011, p. 60). Bridging involves different types of institutional work at different systems levels to first create and then legitimize a new hybrid logic. Table 48 presents the institutional work conducted by the positive-case principal to create and legitimize the hybrid reading-instruction logic organized by systems levels.
Collaborative cocreation includes efforts to “discredit prior institutional templates” while engaging “in ongoing negotiations, experimentation, competition, and learning, which resolves over time into shared conceptions of problems and solutions” (Zietsma & McKnight, pp. 144–145, 2009). In the positive-case school, principal, literacy leader, and teacher descriptions revealed that collaborative cocreation was ongoing through professional development conducted by outside experts, internal champions with advanced training, PLCs, teacher meetings, peer observations, formal coaching relationships, and informal problem-solving. Combining formal professional development in the science of reading, accompanied by job-embedded opportunities to learn, including peer observations and collaborative discussions, results in significant changes in classroom reading-instruction practices (Parise & Spillane, 2010).

Table 48

Institutional Work to Create a Hybrid Logic Organized by Systems Levels

<table>
<thead>
<tr>
<th>Systems level</th>
<th>Institutional work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microlevel work (individual)</td>
<td></td>
</tr>
<tr>
<td>Opportunity Recognition</td>
<td></td>
</tr>
<tr>
<td>1. Recognize and capitalize on opportunities to support reflection away from the dominant logic</td>
<td></td>
</tr>
<tr>
<td>The principal recognized respected and influential individuals with autonomous reflexivity, or those entrepreneurial individuals with the capacity to reflect apart from the dominant reading-instruction logic and organizational community (Archer, 2003). Autonomous individuals, including the literacy leader, a special education teacher, and a first-grade teacher, received advanced Orton Gillingham training. Autonomous individuals acted as innovation champions with technical expertise who facilitated innovation adoption through peer education and proof of effectiveness (e.g., Rogers, 2003).</td>
<td></td>
</tr>
<tr>
<td>2. Reframe problems and develop novel solutions using counterfactual thinking. The principal used sensegiving to warmly respect past reading-instruction practices while framing a problem, the need to achieve reading-policy coherence, and alternatives as augmenting past reading-instruction behaviors.</td>
<td></td>
</tr>
<tr>
<td>Mesolevel work (organizational)</td>
<td></td>
</tr>
<tr>
<td>Design the New Organizational Form</td>
<td></td>
</tr>
<tr>
<td>1. Develop a new organizational structure supporting novel solutions. At the organizational level, the principal and champions led the reading-instruction culture to cull together intact, conflicting, and complementary elements from two established reading-instruction logics to create a new hybrid logic.</td>
<td></td>
</tr>
<tr>
<td>2. Theorize why the new organizational structure makes sense. Literacy educators theorized that the novel solution made sense because the hybrid logic respected strengths and augmented weaknesses of the previous reading-instruction logic.</td>
<td></td>
</tr>
<tr>
<td>Macrolevel work (societal level)</td>
<td></td>
</tr>
<tr>
<td>Legitimation of the New Organizational Form</td>
<td></td>
</tr>
<tr>
<td>1. Legitimize the novel solution/hybrid logic by linking it to legitimate external referents. In this case, the principal linked the new hybrid logic, balanced reading instruction, to evidence-based reading policy to achieve legitimacy.</td>
<td></td>
</tr>
</tbody>
</table>

The principal, literacy leader, and teachers engaged in a successful legitimation project leading to strategic isomorphism (Aurini, 2006). In a legitimation project, organizations continually interpret external environment cues to inform strategic coupling activities to attain legitimacy in the external environment (Aurini, 2006, p. 85). Strategic isomorphism describes an organization’s creation rather than adoption of templates leading to legitimacy (Aurini, 2006). In the positive case, legitimation occurred in four stages: innovation, local validation, diffusion, and general validation (e.g., C. Johnson et al., 2006). A subject is considered legitimized once it receives cultural endorsement from outside the boundaries of the local organization (Scott, 2013; Suchman, 1995). The literacy leader’s statement disclosed evidence of legitimacy.

Well … our teachers were trained … I think for the most part, because it’s a small district we’re able to do things like that and give people the opportunity … so it is working for us and not only … what’s nice is we’re also able to [share] with other schools and … we feel like an expert at this point.

**Lessons learned.** Reading-policy coherence may diminish in cases where steady institutional work aims to reject an imposed effective reading-instruction logic to maintain existing meaning-emphasis reading-instruction logics and practices. In contrast, reading-policy coherence may be enhanced in cases where steady institutional work aims to achieve collaborative cocreation of a hybrid reading-instruction logic that respects and augments the preexisting meaning-emphasis reading-instruction logics and practices.

**Practical Implications**

Practical implications include the following:

1. At the school-board level, develop an unwavering commitment to developing excellent reading-instruction practice and reading-policy coherence. Hold mediating
agents, including superintendents, principals, and literacy coaches accountable to achieve reading-policy coherence.

2. If necessary, at the school-board level, hire an outside consultant to (a) evaluate if local reading-instruction policies are valid under law, (b) write strong and equitable reading-instruction policy aligned with rigorous research evidence and reading-policy guidelines, and (c) promote positive and effective board, superintendent, principal, and educator relationships.

3. Recruit and retain superintendents with strong systems-leadership skills (e.g., Senge, 2015).

4. Recruit and retain primary school principals with strong collaborative-leadership skills (e.g., Coleman, 2011).

5. Think entrepreneurially and view polarization between conflicting reading-instruction logics as an opportunity for innovation.

6. Hire an outside expert in the science of reading to lead whole-system learning.

7. Have the courage to relocate or dismiss individuals who engage in oppositional behaviors to protect ineffective reading-instruction practices.

**Insight 5: Effective Reading Curriculum and Instruction Matter**

**Discussion.** Reading-policy provides guidelines to teach reading using evidence-based curriculums (ESSA, 2015) and scientifically-based reading instruction. The impact of an evidence-based reading curriculum (0.80) exceeds other policy efforts aimed at improving reading achievement (Whitehurst, 2009). Likewise, use of scientifically-based reading instruction in alignment with reading policy is associated with improved reading achievement (Al Otaiba et al., 2008; Gamse et al., 2008; Newmann et al., 2001). In the negative-case school,
reading curriculum and instruction were less aligned with reading-policy guidelines and yielded reading achievement outcomes in the bottom 50% of the state (Public School Review, 2020). In contrast, in the positive-case school, reading curriculum and instruction were more closely aligned with reading-policy guidelines and yielded reading achievement outcomes in the top 30% of the state (Public School Review, 2020).

Rigorous evaluations provided evidence that the core curriculums used in both cases, the Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching (Fountas & Pinnell, 2017) and Units of Study (Calkins et al., 2015) lack evidence of effectiveness (Adams et al., 2020; Schwartz, 2019). Effective reading instruction concurrently incorporates two interrelated sets of skills: foundational reading skills and reading-comprehension skills (Foorman et al., 2016). My analysis found evidence that in both cases, reading curriculums almost completely met the criteria for reading comprehension (90%) yet failed to meet the criteria for foundational reading skills (7%–13%). The analysis also found evidence that in each case the alignment of reading-instruction with rigorous research and reading-policy guidelines varied. In the negative case, meaning-emphasis reading instruction in kindergarten (15%) and first grade (32.5%) minimally met criteria for foundational reading skills. In the positive case, however, an Orton Gillingham approach (code-emphasis) to reading instruction in kindergarten (32.5%) and first grade (72%) more completely met criteria for foundational reading skills.

**Lessons learned.** The positive-case school backfilled the foundational reading-skill gap in their curriculums with the addition of an Orton Gillingham approach to reading instruction. Foundational reading skills include print concepts, phonological awareness, phonemic awareness, phonics, and fluency (Foorman et al., 2016; NRP, 2000). The Orton Gillingham approach provides explicit instruction in “phonology and phonological awareness, sound-symbol
correspondence, syllables, morphology, syntax, and semantics” (Ritchey & Goeke, 2006, p. 171). Research provides evidence that using an Orton Gillingham approach to teach reading in first-grade classrooms significantly improves both foundational reading and comprehension skills (Joshi, Dahlgren, & Boulware-Gooden, 2002; Stoner, 1991).

Practical Implications

A rigorous reading-curriculum evaluation tool organized by content areas aligned with the components of effective reading instruction may help literacy leaders identify and backfill gaps in currently implemented reading curriculums. An example is the curriculum review tool used in this study: *The Rubric for Evaluating Reading/Language Arts Instructional Materials for Kindergarten to Grade 5* (Foorman et al., 2017). Likewise, a rigorous reading-instruction evaluation tool organized by content areas aligned with the essential elements of scientifically-based reading instruction may help literacy leaders to identify and backfill gaps in existing reading instruction practices. An example is the reading instruction evaluation tool used in this study: the *Principal’s Reading Walk-Through Checklists: Kindergarten-Grade 3* (Tanner-Smith et al., 2009). Moreover, using both evaluation tools may assist literacy leaders to develop a hybrid approach to reading instruction that respects and augments existing reading instruction practices.

Value Added

Added value is realized through insights emerging from mixed methods research. Mixing quantitative and qualitative methods in a single study provides a more complete understanding of the numerical trends and social details underlying a phenomenon than either method could alone (Tashakkori & Teddlie, 2003). An overarching meta-insight emerged from the mixing both methods in a single study. Ongoing and dynamic policy mediation concurrently—at all systems
levels in a reading-instruction culture—is essential to transform reading-instruction logics and highly institutionalized processes and practices, and to craft reading-policy coherence.

**Delimitations**

Several delimitations narrowed the scope of the research study, including the following:

1. Specification of the problem: reading policy fails to influence the technical core of the classroom and limited the scope of the study (Creswell & Guetterman, 2019).

2. The study was restricted to document analysis, observations, and interviews conducted in a unique context: small rural schools in northwest Connecticut. Small rural settings in Connecticut are mostly White, feature small class sizes, extravagant per-pupil spending, and are among the wealthiest rural areas in the nation. The distinctiveness of the setting makes study replication difficult (Creswell & Poth, 2018).

3. An *a priori* codebook informed by the theoretical framework guided the first deductive phase of thematic analysis and limited coding to predetermined codes. The second inductive phase of thematic analysis traced emergent codes. However, themes closely reflect the theoretical framework, suggesting that the *a priori* coding process limited the emergence of codes (Creswell & Poth, 2018).

4. Research questions focused on explaining microfoundational processes, social processes, and underlying degrees of reading-policy coherence. Factors outside of social processes may also limit policy coherence. For instance, a school’s master schedule may limit the time available to reach reading-policy goals.
Limitations

Chapter 4 detailed limitations related to data collection and analysis, observer bias and reactivity during observations, social desirability during interviews, my limited mixed methods expertise, and the extent of time involved in conducting a sequential study. Other study limitations included the following:

1. As a doctoral student, I conducted this research study as a single researcher. The quantitative phase of the study is, therefore, subject to single-coder bias. The qualitative phase of the study depends on my interpretation of microfoundational processes, and qualitative findings could be interpreted differently by others.

2. I did not plan to code observations quantitatively. The need arose during the qualitative phase when observations revealed that teachers’ instructional practices did not necessarily reflect the intent of implemented curriculums. I conducted quantitative coding to ensure extreme deviant designations were accurate.

3. I initially planned to conduct two interviews and to follow select interviews with meetings to conduct member checking. All participants granted permission for one interview.

4. Although I developed an *a priori* codebook with explicitly defined terms, my experience observing microfoundational processes in other small rural schools likely influenced my analysis, interpretations, and explanations.

5. Participants may not have been transparent; in one example, I was denied a request to observe regularly scheduled reading instruction. In a second example, although I often encountered ideological renegotiation, I also encountered direct fabrication.
6. Another limitation relates to participant recruitment. I extended study invitations to superintendents, who then shared the invitation with principals. Superintendents then selected to send invitations to some but not all principals in their region.

7. The final limitation was the difficulty involved in writing a detailed comparative-case-study report. Challenges included narrowing the scope of the data presented while including sufficient information to provide the reader with a nuanced understanding.

**Recommendations for Future Studies**

Several issues beyond the scope of this study arose and remain unexplained. First, across the small rural schools, superintendents shape reading-policy decisions and enactments with fear of school board reprisals. Several district leaders shared an unwillingness to expose reading-instruction practices as ineffective because of possible board reprisals, including contract renewal. School leaders with the “board’s ear” expressed power to resist the superintendent’s influence. Second, local school board members interpret and enact reading policies with or without expert council, reference to research, and through the lens of existing practices and processes. Explanations for variations in reading-policy coherence may have been different with consideration of an additional systems level: the board of education. A future replication study might, therefore, include a document analysis of the board’s policies, observations of board policy-committee meetings, and interviews with board members. Research questions might include the following:

1. How does the motivation, power, and influence of elected school board members influence reading-policy enactment and coherence?
2. How do school board members’ interpretations of federal reading policy influence local reading-policy coherence?

Additionally, researchers might undertake an exploratory sequential mixed methods research study to develop an instrument to evaluate the degree of alignment between local school-board policies and rigorous research and standards. Research questions might include the following:

1. What are the indicators of alignment between a local school board’s policy and rigorous research and standards?
2. Is it possible to create an instrument to measure coherence between the local school board’s policies and rigorous research standards?

This research informs the development of an intervention study. The purpose of the intervention might be to support literacy leaders to responsibly and positively mediate reading policy. Components of the intervention might include a report detailing the degree of coherence between reading-policy guidelines and local reading-instruction logics, identifying locations of complexity in need of mediation, and facilitating whole-systems learning to develop an in-depth knowledge of the science of reading and facilitation of collaborative cocreation of a hybrid reading-instruction logic. Research questions might include the following:

1. How does knowledge of the degree of reading-policy coherence influence literacy leaders’ intent to act to mediate reading policy?
2. How does knowledge of the location of complexity influence literacy leaders’ self-efficacy to mediate reading policy?
3. How does whole-systems learning surrounding knowledge of the science of reading influence reading-policy coherence?
4. How does the facilitation of collaborative cocreation of a hybrid reading-instruction logic influence reading-policy coherence?

Finally, also outside the scope of this study but relevant, a set of perceptions linked to extreme variations in reading-policy coherence prove compelling for further study. In the negative-case school, the reading-instruction culture appeared to perceive the imposed reading-instruction logic as critical of and therefore threatening to existing reading-instruction practices. In contrast, in the positive-case school, the reading-instruction culture perceived the imposed reading-instruction logic as respectful of and augmenting existing reading-instruction practices. Another comparative case study might be undertaken to answer the following research questions.

1. How threatening do superintendents, principals, literacy leaders, and teachers perceive reading policy to be?
2. How do superintendents’, principals’, literacy leaders’, and teachers’ perceptions of threat explain reading-policy coherence?

**Contribution to the Research**

This research study makes several important contributions beyond the existing literature. First, the research study answers widespread calls to look beyond the enduring problem of low early reading achievement as a reading-skill problem emanating from child, family, community, and societal inadequacies. Instead, this research used an institutional lens and considered low early reading achievement as a social problem, emanating from the reading-instruction practices and processes institutionalized in local reading-instruction cultures.

Second, a novel institutional lens provides the reader with a unique perspective from which to generalize findings. The research provides rich qualitative descriptions linked to quantitative findings to explain the social conditions under which it was possible to achieve
higher reading-policy coherence in one small rural school. Equally important, the research also provides rich qualitative descriptions linked to quantitative findings to explain the conditions under which it was less possible to achieve reading-policy coherence in a second school. Rich qualitative descriptions linked to quantitative findings equip the reader to generalize findings and to consider the hidden social mechanisms underlying reading-policy coherence and reading achievement in their contexts.

Finally, this research supports leaders to mediate policy in several ways. First, study findings may increase leader self-efficacy and intent to act because it provides evidence that if reading policy is mediated responsibly and positively, it is possible to craft reading-policy coherence. Second, this research challenges literacy leaders to reflect apart from a dominant reading-instruction logic. Reflection apart from a dominant logic allows leaders to reconfigure, recombine, and create new logics (Thornton et al., 2015). Third, the research presents a method to evaluate the degree of reading-policy coherence in context. Fourth, because the research offers a model to locate complexity between imposed and local reading-instruction logics, it isolates the locations in the greatest need of mediation and increases leader efficiency. Finally, generalizing the method and model improves the effectiveness of an already existing educational system.

**Summary**

Reading researchers typically focus on the cognitive skills of real reading (decoding, word identification, and comprehension; Gee, 1999; Street, 2003, 2013), student deficits emerging from inadequate early experiences (Henderson, 2002), neurobiological differences that make learning to read difficult (e.g., S. E. Shaywitz, 1998; S. E. Shaywitz et al., 1999), or the effectiveness of reading instruction (e.g., Foorman et al., 2016; National Reading Panel [NRP], 2000). As a result, reading researchers often neglect learning to read as a social practice (Gee,
1999; Street, 2003, 2013). When examined as a social practice, low early reading achievement is conceptualized as a problem situated in the instructional activities and cultural practices institutionalized in schools (Dudley-Marling, 2004; Gee, 2008; Gergen, 1990). This research answered the call to move beyond conventional research approaches to understand the institutional and cultural obstacles that underly low early reading achievement (e.g., Patton Davis & Museus, 2019; Gee, 2001; Seidenberg, 2013).

This study exposed and explained the microfoundational social processes hidden in reading-instruction cultures between the structural input of federal reading policy and the cultural output linked to variations in degrees of reading-policy coherence. Quantitative results drawn from document analyses and structured observations were used to purposively select one positive and one negative extreme deviant-case school for follow-up interviews. Quantitative results also informed the development of the qualitative-interview protocol. Qualitative results drawn from semistructured interviews at multiple levels in each case captured individuals’ circumstances and experiences. Within-case analysis linked specific microfoundational processes to high and low degrees of reading-policy coherence. Two metainferences were drawn from mixed methods cross-case analysis. In the negative case reading instruction culture, microfoundational processes emerged from complexity and coalesced to reject the imposed reading-instruction logic to protect the local reading-instruction logic. In contrast, in the positive-case reading-instruction culture, microfoundational processes also emerged from complexity but coalesced to reconcile conflicting logics by recombining imposed and local reading-instruction logics. Finally, an overarching metainference emerged from the mixed methods study: ongoing and dynamic policy mediation concurrently—at all systems levels in a reading-instruction culture—is essential to
transform reading-instruction logics and highly institutionalized processes and practices, and to craft reading-policy coherence.

Reflection

Tragically, millions of the nation’s youngest school children have and continue to be locked into reading-instruction cultures featuring reading-instruction practices that make learning to read confusing and difficult. Left undisturbed, confusing reading-instruction practices at least diminish and may ultimately impair the reading development of otherwise capable children. This reality is perhaps more tragic in remote rural settings where outmoded and empirically refuted ideas about reading instruction persist undisturbed.

This dissertation study aimed to uncover and explain the hidden social mechanisms underlying the persistence of ineffective reading instruction in small rural schools, despite evidence of effective reading instruction and clearly articulated reading-policy guidelines to implement effective reading instruction. The dissertation was inspired by my experience inside rural reading-instruction cultures. My concern about this tragic reality was heightened during observations in one rural primary school near my hometown in Connecticut. There, I encountered masterful and dedicated kindergarten teachers who expertly executed the school’s core reading curriculum. However, despite teachers’ technical efficiency, except for a few, most kindergarten students experienced confusion between the code-emphasis reading ideas they brought to school, and the meaning-emphasis reading ideas they encountered in school.

The school’s core reading curriculum was the highly scripted Units of Study (Calkins et al., 2015). The Units of Study purports to build young students’ foundational reading skills. However, findings from this research study and other rigorous reviews provide evidence that although the Units of Study does adequately teach one essential reading skill, comprehension, it
neglects to teach four other critical foundational reading skills: phonemic awareness, phonemic decoding, fluency in word recognition and text processing, and vocabulary skills (Adams et al., 2020; Schwartz, 2019).

Restricted to the philosophy of the *Units of Study*, teachers referred to students as “readers” and led students to integrate all available information (context, semantic, syntactic, and first-letter-sound cues) to hypothesize what unknown words might be to approximate reading. The founding author of the *Units of Study*, Calkins, equates the approximation of reading to training wheels that support students to implicitly acquire and generalize reading strategies. Operating under this worldview, teachers refused, despite repeated student requests, to assist students to develop and use decoding skills to identify unknown words.

Kindergarten students confined to this approach responded with confusion. Some students disclosed pre-school developed understanding that decoding, not guessing, is reading. These students grew visibly frustrated with repeated redirections to reference cues to guess unknown words. On several occasions, I heard a student say something like, “I see the picture, but what does the word say?” Other students revealed pre-school developed acquisition of the alphabetic principle (letter–sound associations) and challenged teacher acceptance of inaccurate guesses. For instance, after one student guessed “crab,” another student pointed out, “how can that be crab? It doesn’t start with c.” Still, other students ignored reading instruction altogether. For instance, one student entered kindergarten at 6-years-old and reading. The teacher explained that the student entered school academically advanced having spent a extra year before kindergarten in the care of a relative who was a retired first-grade teacher. In another example, several students avoided approximating reading and scrutiny while occupying themselves with quiet distractions during daily 45-minute independent reading. Finally, some students grew
distressed. In a particularly heart-wrenching example, the youngest student in the class, who
struggled with phonemic awareness and had not yet developed the alphabetic principle, made eye
contact with me and wept quietly as the teacher instructed students to read a brief passage and
write a response. As I knelt to help, the student leaned in and whispered fiercely, “I am not a
reader!”

After a time, I became convinced that if a student locked into that rural reading-
instruction culture did learn to truly read, or to “relate a new code, a written script, to an existing
code, spoken language” (Seidenberg, 2013, p. 331), it would be despite, not because of locally
institutionalized reading-instruction practices. After a particularly grueling Units of Study readers
workshop, one masterful teacher disclosed agreement with the observation, “they really do need
more than this.” Later that year, the same teacher recounted their suggestion to augment the
Units of Study with Fundations (a code-emphasis curriculum). The proposal was rejected with
the literacy leader’s explanations that Fundations is a special-education curriculum reserved for
struggling readers with no need to put typically developing students through “that”, averring it
would destroy their love of reading.

During my time observing in the rural school, a problem crystalized and a question, often
repeated by the cognitive scientist, neuroscientist, and psycholinguist Seidenberg resounded in
my mind. The problem seemed to be that in small rural reading-instruction cultures with highly
institutionalized reading-instruction practices, individuals and groups respond to top-down
reading-policy pressures with social processes to resist reading-policy pressures. Seidenberg’s
question “if the science [of reading] is so advanced, why do so many people read so poorly?”
inspired me to craft a question of my own (Seidenberg, 2013, p. 332). I adapted Seidenberg’s
question to ask: If the science of reading is so advanced, and the policies mandating
implementation of effective reading instruction are so clearly articulated, why do so many students still struggle to learn to read?

Also during this time, reading empirical reading research and institutional theory, while interacting with reading researchers and advocates, left me with a clear research challenge. To explain low early reading achievement, reading researchers have focused heavily on investigating the cognitive skills involved in reading and developmental deficits emerging from inadequate early experience and neurobiological differences that make learning to read difficult. In this way, reading researchers have conceptualized low early reading achievement as a reading-skill problem emanating from students, families, communities, and society. Reading researchers neglect, however, to investigate learning to read as a social process. This study used an institutional lens and conceptualized low early reading achievement not as a reading-skill problem, but as a problem emanating from the instructional activities and cultural processes institutionalized in schools.

My greatest inspiration, however, came from my conceptualization of reading as an essential human right, that in my mind, should be guaranteed. We teach reading to equip, but also to liberate. In contemporary society, reading is fundamental to living a self-selected life (Knudsen et al., 2006). For those of us who read well, we read effortlessly for pleasure and the mundane. Civically, reading well prepares us to contribute to rather than depend on society (Knudsen et al., 2006). Reading well equips us to critically evaluate our lives and consequently has the power to liberate us from the circumstances of our lives (Freire, 1983). When we read, we can imagine and attain an otherwise unimaginable life. In sum, while reading is, at times, a fundamental, mundane, civic, and pleasurable act, reading is also a matter of social justice with the power to emancipate segments of society from exclusion and confinement by oppression.
Finally, I find it difficult to remain still while our youngest students are locked into reading instruction cultures that make learning to read confusing and difficult. Empirical knowledge of the science of reading and clearly articulated evidence-based reading policy, although critical, fail to influence the technical core of the classroom and, as a result, decades of low early reading achievement. Beyond evidence and policy, it is also necessary to use an institutional lens to reframe the enduring problem of low early reading achievement as emanating from children, families, and communities, to emanating from the instructional and cultural processes and practices institutionalized in schools. Thus armed, I move on, ready to continue the good fight.
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Retrieved from https://bu.edu/journalofeducation.


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Good to hear from you!

Yes, you may use the FCRR principals reading walk-through for grades K–3. I don’t think these checklists were in response to a request.

Since then, I led the development of more recent checklists that you are welcome to use (both lists are good).

You can find them here: https://ies.ed.gov/ncee/edlabs/regions/southeast/inc/docs/School_Leaders_Literacy_Walkthrough_Kindergarten_First_Second_and_Third_Grades.pdf

School Leader’s Literacy Walkthrough2 Introduction School Leader’s Literacy Walkthrough Kindergarten, First, Second, and Third Grades. The School Leader’s Literacy Walkthrough is designed to assist school leaders in observing specific research-based practices during literacy

ies.ed.gov

Best,
Marcia

Marcia Kosanovich, Ph.D.
Chief Executive Officer
MK Educational Research & Practice, LLC
Wake Forest, NC 27587
850-445-4888

During a phone call with Dr. Kosanovich on 5/21/2018, I requested permission to use the Rubric for Evaluating Reading/ Language Arts Instructional Materials for Kindergarten to Grade 5 (Foorman, Smith & Kosanovich, 2017). She wrote me later that day. Two documents were attached, the Rubric for Evaluating Reading/ Language Arts Instructional Materials for Kindergarten to Grade 5 (Foorman, Smith & Kosanovich, 2017) and the Guidelines to Review Comprehensive Core Reading Programs Florida Center for Reading Research.

Hi Deb,
Great to talk to you this afternoon! Attached (below) are the documents we discussed and you are welcome to use them.

Best of luck!
Marcia
Dear Dr. Al Otaiba,

I am writing to ask permission to use the rating form used to determine SBBR alignment of core K–5 reading curriculums for Reading First suitability (Al Otaiba, Kosanovich-Grek, Torgesen, Hassler & Wahl, 2005). I intend to use the rating form to assess the alignment of an existing curriculum in a single rural school with SBRR as part of a needs assessment.

Thank you in advance for your consideration,

Deb

Deb DeBisschop
ddebiss1@jhu.edu
(860) 806-6753

Hi Deb,
I have no problem with you doing so. Best of luck in your study! I will look forward to reading your work.

Warmly,
Stephanie

Stephanie Al Otaiba
Professor and Patsy and Ray Caldwell Centennial Chair in Teaching and Learning
Room 314b Harold Simmons School of Education and Human Development
Southern Methodist University
PO Box 750455
Dallas, TX 75275-0455
Cell 850-445-5805
Office fax 214-768-2171
Email salotaiba@smu.edu

Editor, Journal of Learning Disabilities
President, Division for Learning Disabilities, Council for Exceptional Children
Appendix B

The Florida Center for Reading Research Guidance Document


The purpose of this document is to guide personnel at the Florida Center for Reading Research in the evaluation of curriculum from the current state of Florida adoption list to determine whether they meet the more restrictive criteria outlined in the Reading First Guidance Document and in the report of the National Reading Panel.

The following information from the Guidance document for the National Reading Panel report is provided as background information for reviewers.

**WHAT ARE THE ESSENTIAL COMPONENTS OF READING INSTRUCTION?**

Scientifically-based reading research has identified five essential components of effective reading instruction. Explicit and systematic instruction must be provided in these five areas:

1. **Phonemic awareness.** The ability to hear, identify and manipulate the individual sounds-phonemes-in spoken words. Phonemic awareness is understanding that the sounds of spoken language work together to make words.

2. **Phonics.** The understanding that there is a predictable relationship between phonemes-the sounds of spoken language-and graphemes-the letters and spellings that represent those sounds in written language. Readers use these relationships to recognize familiar words accurately and automatically and to decode unfamiliar words.

3. **Vocabulary development.** Development of stored information about the meanings and pronunciation of words necessary for communication. There are four types of vocabulary:
   - **Listening vocabulary**—The words needed to understand what is heard
   - **Speaking vocabulary**—The words used when speaking
   - **Reading vocabulary**—The words used to understand what is read
   - **Writing vocabulary**—The words used in writing

4. **Reading Fluency, including oral reading skills.** Fluency is the ability to read text accurately and quickly [and with prosody]. It provides the bridge between word recognition and comprehension. Fluent readers recognize words and comprehend at the same time.

5. **Reading comprehension strategies.** Strategies for understanding, remembering, and communicating with others about what has been read. Comprehension strategies are a set of steps that purposeful, active readers use to make sense of text.

**WHAT ARE THE KEY ELEMENTS OF AN EFFECTIVE READING PROGRAM BASED ON SCIENTIFICALLY BASED READING RESEARCH?**

A high-quality reading program that is based on scientifically-based research must include the instructional components of reading instruction (see above) integrated into a coherent
instructional design. A coherent design includes explicit instructional strategies, coordinated instructional sequences, ample practice opportunities, and aligned student materials. The design should also consider the allocation of time, ensuring a protected, uninterrupted block of time for reading instruction of at least ninety minutes per day.

A high quality reading program also includes assessment strategies for diagnosing student needs and measuring progress as well as a professional development plan that ensures that teachers have the skills and support necessary to effectively implement the program.

**DEFINITION OF TERMS FROM THE READING FIRST DOCUMENT’S DESCRIPTION OF A CORE READING CURRICULUM THAT IS CONSISTENT WITH THE FINDINGS FROM SBRR:**

**Coherent instructional design.** A coherent design includes explicit instructional strategies, coordinated instructional sequences, ample practice opportunities, and aligned student materials.

**Explicit instructional strategies.** An explicit instructional strategy involves directly presenting materials and relationships that need to be learned. For example, if we want children to know how to use active comprehension strategies while they read, we should clearly identify those strategies for children, show how they are used to enhance comprehension, and provide opportunities for practice with feedback. The same principles apply to instruction in all the critical components of reading skill.

**Coordinated instructional sequence.** A program has a coordinated instructional sequence when skills are taught and practiced in a logical, coherent way. A coordinated instructional sequence also implies that instruction covers in a comprehensive way the material to be learned. It suggests that the sequence to instruction in critical elements should be preplanned and pre-organized.

**Ample practice opportunities.** Ample practice opportunities are provided when children are asked to apply what they have been taught in order to accomplish specific reading tasks, such as accurately pronouncing words in text or constructing the meaning of a text. Practice should follow in a logical relationship with what has just been taught in the program.

**Aligned student materials.** This means that materials should work coherently with classroom instruction to reinforce the acquisition of specific skills in reading. If children are taught specific letter-sound relationships, they should have the opportunity to practice applying that knowledge to decoding words in context. Instruction should support the kinds of reading practice children are assigned. If children are taught specific vocabulary words, they should have the opportunity to read materials containing those words or be asked to write compositions that apply those words in sentences or paragraphs.
**RATING FORM FOR CURRICULUM MATERIALS, READING FIRST CURRICULUM PROJECT, FLORIDA CENTER FOR READING RESEARCH**

Curriculum being rated________________________ Grade Level________________

Rater_______________________________ Date_______________________

Our primary goal is to determine whether curricula at specific levels embody the content and instructional practices advocated in the *Reading First* Guidance Document.

You are asked to indicate whether instruction in a specific content area is present or not, and whether the instructional design follows the principals outlined in the Reading First Document and in the report of the National Reading Panel. If you rate an instructional component as unacceptable, please provide a specific examples (along with reference points) to document the weaknesses you identify.

<table>
<thead>
<tr>
<th>Context area</th>
<th>Presence</th>
<th>Quality (acceptable or unacceptable)</th>
<th>Comments (extend to next page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Dynamic Indicators of Basic Early Literacy Skills 6th Edition: DIBELS Letter Naming Fluency

SHORT FORM DIRECTIONS
Make sure you have reviewed the long form of the directions in the DIBELS Administration and Scoring Guide and have them available. Say these specific directions to the student:

Here are some letters (point to the student probe). Tell me the names of as many letters as you can. When I say, “Begin,” start here (point to first letter), and go across the page (point). Point to each letter and tell me the name of that letter. If you come to a letter you don’t know I’ll tell it to you. Put your finger on the first letter. Ready, begin

Benchmark K.1 DIBELS Letter Naming Fluency

\[ \begin{array}{cccccccccccc}
& g & N & E & Y & R & l & V & d & H & Z & \\
N & d & x & S & C & n & j & H & s & S & \\
e & n & G & h & c & I & h & B & b & O & \\
Y & F & p & D & L & I & q & c & D & Q & \\
r & v & F & J & Z & M & P & p & u & \\
L & G & A & f & V & B & P & k & m & I & \\
v & M & e & r & y & z & a & L & U & A & \\
D & y & q & v & w & u & T & w & N & U & \\
H & j & K & e & r & X & T & z & Y & X & \\
Z & x & f & m & W & W & s & J & I & k & \\
L & E & R & K & g & N & E & Y & R & L & \\
\end{array} \]

Total: ________
Appendix D

Dynamic Indicators of Basic Early Literacy Skills 6th Edition: DIBELS Initial Sound

Fluency

SHORT FORM DIRECTIONS
Make sure you have reviewed the long form of the directions in the DIBELS Administration and Scoring Guide and have them available. Say these specific directions to the student:

This is mouse, flowers, pillow, letters (point to each picture while saying its name). Mouse (point to mouse) begins with the sound /m/. Listen, /m/, mouse. Which one begins with the sounds /fl/?

<table>
<thead>
<tr>
<th>Correct Response:</th>
<th>Incorrect Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student points to flowers, you say: Good. Flowers begins with the sounds /fl/.</td>
<td>If you student gives any other response, you say: Flowers (point to flowers) begins with the sounds /fl/. Listen, /fl/, flowers. Let’s try it again. Which one begins with the sounds /fl/?</td>
</tr>
</tbody>
</table>

Pillow (point to pillow) begins with the sound /p/. Listen, /p/, pillow. What sound does letters (point to letters) begin with?

<table>
<thead>
<tr>
<th>Correct Response:</th>
<th>Incorrect Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student points to flowers, you say: Good. Flowers begins with the sounds /l/.</td>
<td>If you student gives any other response, you say: Flowers (point to flowers) begins with the sounds /l/. Listen, /l/, flowers. Let’s try it again. Which one begins with the sounds /l/?</td>
</tr>
</tbody>
</table>

Here are some more pictures. Listen carefully to the words.

Show the student the first page of pictures. Ask the questions in the scoring booklet.

Timing is intermittent. After you finish asking the question, begin your stopwatch. Stop your stopwatch as soon as the child responds.

Time: _______ Seconds  Total Correct: _______

60 x Total Correct = _______ Correct Initial Sounds per Minute

Secon/l/ds
Appendix E

Shaywitz DyslexiaScreen (SDS)

**LANGUAGE ITEMS**

<table>
<thead>
<tr>
<th>How often does the student …</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost</th>
<th>Always</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tell a story in a logical sequence?</td>
<td></td>
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<tr>
<td>2. Express ideas in a jumbled or incomplete sentences?</td>
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<tr>
<td>3. Have trouble expressing his/her thoughts in words?</td>
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<tr>
<td>4. Have trouble identifying letters or numbers?</td>
<td></td>
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<tr>
<td>5. Speak in a way that is difficult to understand?</td>
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<tr>
<td>6. Requires extra help-gestures, repetition-to follow verbal directions?</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**ACADEMIC ITEMS**

<table>
<thead>
<tr>
<th>How often does the student …</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost</th>
<th>Always</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Show interest in books and reading?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>8. Associate sound with letter correctly?</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How likely do you think it is that the student …</th>
<th>Definitely Likely</th>
<th>Very Likely</th>
<th>Moderately Likely</th>
<th>Moderately Unlikely</th>
<th>Very Unlikely</th>
<th>Not at All Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Has a problem learning?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10. Will be ready (i.e., academically prepared) to go to the next grade?</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Appendix F

Needs Assessment Consent Form

Johns Hopkins University
Homewood Institutional Review Board (HIRB)

Needs Assessment Consent Form

Title: Deborah DeBisschop
      Doctoral Student

Principal Investigator: Dr. Christine Eith

Additional Investigators Dr. Mary Ellen Lewis

Date: March 15, 2017

PURPOSE OF RESEARCH STUDY

1. The first purpose of the research study is to investigate to what degree the number (%) of kindergarten students identified as at-risk for reading difficulty mirrors the Connecticut Longitudinal findings regarding number (%) of kindergarten students actually at risk for reading failure.

2. The second purpose of the research study is to investigate to what degree the number (%) of kindergarten students identified as at-risk for reading difficulty mirrors the DIBELS findings regarding number (%) of kindergarten students actually at risk for reading failure.

I anticipate that approximately five teachers will participate in this study.

PROCEDURES

This study contains one component.

1. Teachers will be invited to complete one brief online questionnaire per student regarding their perceptions of kindergarten student risk for reading failure.

Time required: It will take approximately three to five minutes to complete each questionnaire or a total of one to two hours to complete the questionnaire for a class of 20 students.

RISKS/DISCOMFORTS

There are no anticipated discomforts.

BENEFITS

Potential benefits include increased understanding of students’ risk for reading failure.

_________________________________________  __________________________
Sign your name here                          Date
Appendix G

Needs Assessment Observation Form With Predetermined Codes

Observer: Location:
Time: Location:
Event 1: Adult Actors:
Goal of Event 1: Student Actors:
Event 2: Group affect:
Goal of Event 2: Present/absent:
Event 3: Present/absent:
Goal of Event 3: Present/absent:

Codes

T: Teacher utterance  W: Whole group instruction
S: Student utterance  S: Small group instruction
CS: Choral student utterance  1:1 One on one instruction
DE: Student disengaged  PA: Phonological awareness
TR: Teacher verbal redirect  PH: Phonics
PR: Physical redirect (signal)  V: Vocabulary
SA: Student affect  F: Fluency
TA: Teacher Affect  C: Comprehension
TS: Teacher Scaffolding  EX: Explicit
TM: Teacher Modeling  IM: Implicit
SW: Sight words

Special Circumstances

<table>
<thead>
<tr>
<th>Event/Time</th>
<th>Observation</th>
<th>Interpretive Analysis</th>
</tr>
</thead>
</table>

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Appendix H

Informed Consent Form

Johns Hopkins University

Homewood Institutional Review Board (HIRB)

Title: Coherence of Reading Policy Goals and Institutionalized Practice in 16 Rural School Districts in Connecticut: A Mixed Methods Comparative Policy Analysis

Principal Investigator: Dr. Mary Ellen Lewis, Visiting Assistant Professor, Johns Hopkins University School of Education

Date: December, 16, 2018

PURPOSE OF RESEARCH STUDY:
The purpose of this research study is to identify and explain the social mechanisms underlying variations in the degree of coherence between reading policy guidelines and reading instruction practices in 16 small rural school districts in Connecticut. We anticipate that approximately 20 people will participate in this study.

PROCEDURES:
District superintendents, literacy specialists, primary school principals, and teachers will be asked to participate in one 45 minute interview. Teachers who complete interviews will also be asked to participate in two separate one hour classroom observations of reading instruction.

RISKS/DISCOMFORTS:
The risks associated with participation in this study are no greater than those encountered in daily life.

BENEFITS:
There are no direct benefits to you from participating in this study.

This study may benefit society if the results lead to a better understanding of how legislators and policymakers can better support rural districts.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:
Your participation in this study is entirely voluntary: You choose whether to participate. If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

If you choose to participate in the study, you can stop your participation at any time, without any penalty or loss of benefits. If you want to withdraw from the study, please contact Deb DeBisschop (student investigator) at (860) 806-57453 or ddebiss1@jhu.edu; or Dr. Mary Ellen Lewis (principal investigator) at mebl@jhu.edu or (410) 516-4925.

If we learn any new information during the study that could affect whether you want to continue participating, we will discuss this information with you.
CIRCUMSTANCES THAT COULD LEAD US TO END YOUR PARTICIPATION:
Under certain circumstances we may decide to end your participation before you have completed
the study. Specifically, we may stop your participation if you are unable to participate fully in the
study.

CONFIDENTIALITY:
Any study records that identify you will be kept confidential to the extent possible by law. The
records from your participation may be reviewed by people responsible for making sure that
research is done properly, including members of the Johns Hopkins University Homewood
Institutional Review Board and officials from government agencies such as the National
Institutes of Health and the Office for Human Research Protections. (All of these people are
required to keep your identity confidential.) Otherwise, records that identify you will be
available only to people working on the study, unless you give permission for other people to see
the records.

To protect your confidentiality, codes rather than district, school, and participant names will be
used to identify all recorded data.

COMPENSATION:
You will not receive any payment or other compensation for participating in this study.

IF YOU HAVE QUESTIONS OR CONCERNS:
You can ask questions about this research study now or at any time during the study, by talking
to the researcher(s) working with you or by calling Deb DeBisschop (student investigator) at
(860) 806-57453 or Dr. Mary Ellen Lewis (principal investigator) at (410) 516-4925.

If you have questions about your rights as a research participant or feel that you have not been
treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University
at (410) 516-6580.

SIGNATURES

WHAT YOUR SIGNATURE MEANS:
Your signature below means that you understand the information in this consent form. Your
signature also means that you agree to participate in the study.

By signing this consent form, you have not waived any legal rights you otherwise would have as
a participant in a research study.

________________________________________  __________________________
Participant’s Signature                      Date

________________________________________  __________________________
Signature of Person Obtaining Consent       Date
(Investigator or HIRB Approved Designee)
Appendix I

Research Study Invitation

Dear Superintendent (insert superintendent name),

This email (letter) invites you and your district to participate in a research study intended to investigate and explain variations in coherence between reading policy goals and reading instruction practices in 16 small rural school districts in Litchfield County, Connecticut. The purpose of this research is to identify and explain the mechanisms that underlie variations in coherence between reading policy guidelines and reading instruction practices. Your district is invited, but not obligated to participate in the research study.

To participate, superintendents, primary school principals, literacy specialists, and teachers will complete one interview that will take 45 minutes to complete. Interview questions will focus on explaining how participants first become aware of and then interpret policy goals and the factors that promote or constrain policy implementation in alignment with goals. Teachers who complete interviews will also participate in two 60 minute classroom observations of reading instruction. Interviews will be conducted, recorded, and transcribed using Zoom Room video conferencing technology. Zoom recordings and transcriptions will be uploaded to MAXQDA qualitative analysis software. Once uploaded, Zoom recordings will be deleted. I will conduct observations of regularly scheduled reading instruction on two separate occasions using a nonparticipant approach without student interaction or involvement in classroom processes. During observations, I will record specific features of reading instruction using a paper observation form. The paper observation form will be scanned and uploaded to MAXQDA qualitative analysis software. Once uploaded to MAXQDA, the paper observation form will be destroyed. Both Zoom and MAXQDA are privately held and password protected. To further protect confidentiality, codes rather than district, school, and participant names will be used to identify all recorded data.

There is no compensation for participating in this study. However, superintendents may elect to receive a report describing the degree of coherence between reading policy goals and reading curriculum and instructional practices in your district. Participation provides a valuable contribution. Study findings will inform future research and will also be used to equip Connecticut policymakers and legislators with knowledge of how to better support small rural school districts.

If you are willing to participate in this important study or have any questions, please contact Deb DeBisschop (student investigator) at ddebiss1@jhu.edu or Dr. Mary Ellen Lewis (principal investigator) at mebl@jhu.edu. Both Deb DeBisschop (doctoral candidate) and Dr. Lewis (visiting assistant professor) are affiliated with the Johns Hopkins University School of Education.

Thank you for your willingness to help with this important study.

Deb DeBisschop
Deborah DeBisschop
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JHU School of Education
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Dr. Mary Ellen Lewis
Visiting Assistant Professor
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2800 N. Charles Street
Baltimore, MD 21218

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Appendix J

Rubric for Evaluating Reading/Language Arts Instructional Materials for Kindergarten to Grade 5

(Foorman et al., 2017).

Examples of ratings and comments in the rubric.

<table>
<thead>
<tr>
<th>Item from rubric</th>
<th>Rating</th>
<th>Example comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades K–2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1D. Phonemic awareness instruction follows a developmental progression-for example, phoneme isolation (first, final, and medial sounds), blending, segmentation, and phoneme deletion; use with tiles then letters [FR practice guide, Rec. 2, #1].</td>
<td>1 (not met)</td>
<td>Phonemic awareness was noted on the scope and sequence; however, phonemic awareness activities were not evident within the lessons of the instructional materials.</td>
</tr>
<tr>
<td>1E. Graphemes (letters) are gradually integrated into phonemic awareness instruction as students become more skilled [FR practice guide, Rec. 2, #1].</td>
<td>5 (completely met)</td>
<td>There is a gradual and consistent link between phonemic awareness and phonics activities throughout the series of materials.</td>
</tr>
<tr>
<td>1J. Materials support instructions that teaches students how to decode multisyllabic words by looking for pronounceable word parts within them (for example, compound words and syllables) [FR practice guide, Rec. 3, #3].</td>
<td>1 (not met)</td>
<td>Materials do not include specific instructions on how to decode multisyllabic words.</td>
</tr>
<tr>
<td>Grades 3–5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2E. Specific texts are included in the materials for teaching various text structures (for example, sequence, comparison, contrast, and cause and effect) to support comprehension and careful reading of narrative and informational text [Adol practice guide, Rec. 2, #1].</td>
<td>4 (substantially met)</td>
<td>There are a considerable number of texts to support comprehension. There are graphic organizers in the back of the teacher editions intended to incorporate this item. However, there is no label on the graphic organizer to indicate the lesson to which they correspond. The addition of where the graphic organizers could be used would be helpful to the teacher for navigation purposes.</td>
</tr>
<tr>
<td>2L. Materials support instruction that teaches students to understand and analyze various points of view for narrative text (for example, author, narrator, and character) and informational text (for example, what the author wants to explain and multiple accounts of the same event) with increasing complexity [EL practice guide, Rec; Writing practice guide, Rec. 2a and 2b].</td>
<td>2 (partially met)</td>
<td>This is marginally included in the mini lessons of the whole group component. Different genres and the author’s purpose are discussed; however, points of view lessons/activities were sparse.</td>
</tr>
<tr>
<td>3A. Materials include extensive practice with short, focused research projects that allow students to have multiple experiences with the research process throughout the year and facilitate development of the ability to conduct research independently [EL practice guide, Rec. 3; Writing practice guide, Rec. 2a and 2b].</td>
<td>2 (partially met)</td>
<td>There is some evidence of this, mostly found in the ancillary materials (science/social studies connections and the activities recommended for centers). However, those materials are not an expected part of daily or even consistent lessons.</td>
</tr>
</tbody>
</table>
Appendix K
Principal’s Reading Walkthrough Kindergarten

### READING WALK THROUGH GUIDELINES FOR KINDERGARTEN CLASSROOMS

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher:</td>
<td>School:</td>
</tr>
<tr>
<td>Grade:</td>
<td>Subject:</td>
</tr>
</tbody>
</table>

1. **Learning objective(s) for the lesson**
   - Objective(s):

2. **Learning objective(s) is evident to the students**
   - Evident
   - Not evident
   - Unable to determine

3. **Learning objective(s) on target for grade-level standards**
   - Yes
   - No
   - Unable to determine

4. **Identify grouping format**
   - Whole group
   - Small group
   - Paired
   - Individual

5. **Determine levels of class engagement**
   - Highly engaged—Most students are authentically engaged.
   - Well managed—Students are willingly compliant and ritually engaged.
   - Not engaged—Many students are not participating in the assigned task or substituting another activity.

6. **Classroom Environment**

   6a. **Classroom behavior management system** effectively creates a positive learning environment.
   - Yes
   - No
   - Unable to determine

   6b. **Classroom arrangement** is conducive to whole group instruction and reading centers (teacher-led center and independent student centers).
   - Yes
   - No
   - Unable to determine

   6c. **Daily class schedule** is posted and indicates a minimum of 90 minutes for reading instruction that includes whole-group instruction, reading centers, and additional time for intensive intervention.
   - Yes
   - No
   - Unable to determine

   6d. **Classroom displays** of current student work and curriculum material reflect the skills and concepts taught.
   - Yes
   - No
   - Unable to determine

   6e. **Teacher’s interactions** with students reflect warmth, encouragement, and enthusiasm.
   - Yes
   - No
   - Unable to determine

7. **Instructional Materials**

   7a. Teacher and student program materials are accessible and organized (e.g., teachers’ guides, big books, puppets, letter-sound cards, pre-decodable and decodable books, vocabulary word lists, charts, student readers, and sufficient selection of leveled texts).
   - Yes
   - No
   - Unable to determine

   7b. Teacher uses a variety of resources during reading instruction (e.g., wipe-off boards, overhead projectors, computers, listening centers, letter tiles).
   - Yes
   - No
   - Unable to determine
## Appendix L

### Principal’s Reading Walkthrough: First Grade

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher:</td>
<td>School:</td>
</tr>
<tr>
<td>Grade:</td>
<td>Subject:</td>
</tr>
</tbody>
</table>

1. **Learning objective(s) for lesson**
   - Objective(s): [space for input]

2. **Learning objective(s) is evident to the students**
   - Evident [ ]
   - Not evident [ ]
   - Unable to determine [ ]

3. **Learning objective(s) on target for grade-level standards**
   - Yes [ ]
   - No [ ]
   - Unable to determine [ ]

4. **Identify grouping format**
   - Whole group [ ]
   - Small group [ ]
   - Paired [ ]
   - Individual [ ]

5. **Determine levels of class engagement**
   - Highly engaged—Most students are authentically engaged.
   - Well managed—Students are willingly compliant and ritually engaged.
   - Not engaged—Many students are not participating in the assigned task or substituting another activity.

6. **Classroom Environment**
   - Classroom behavior management system [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]
   - Classroom arrangement [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]
   - Daily class schedule [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]
   - Classroom displays of current student work and curriculum material [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]
   - Teacher’s interactions with students [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]

7. **Instructional Materials**
   - Teacher and student program materials [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]
   - Teacher uses a variety of resources during reading instruction [ ]
     - Yes [ ]
     - No [ ]
     - Unable to determine [ ]

---

Appendix M

Observation Form

Exploring Variation in the Degree of Coherence Between K–3 Reading Policy Guidelines and K–3 Reading Instruction Practices

Observer:
Observed:
Date:
Time:
Place:

Special Circumstances

Predetermined Codes

W: Whole group instruction
S: Small group instruction
1:1 One on one instruction
PA: Phonological awareness
PH: Phonics
V: Vocabulary
F: Fluency
C: Comprehension
T: Teacher utterance
FA: Formative Assessment
SA: Summative Assessment
RI: Responsive Instruction

<table>
<thead>
<tr>
<th>Event/Goal</th>
<th>Time</th>
<th>Observation</th>
<th>Interpretive Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event 1</td>
<td></td>
<td></td>
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</tbody>
</table>

Goal:
Appendix N

Interview Protocol

Coherence of Reading Policy Goals and Institutionalize Practice in 16 Rural School Districts in Connecticut:
A Mixed Methods Comparative Policy Analysis

Interviewer: 
Interviewee: 
Date: 
Time: 
Place: 

Interview Introduction

Purpose of the study: to identify and explain the social mechanisms underlying variations in the degree of coherence between reading policy guidelines and reading instruction practices in 16 small rural school districts in Connecticut.

Obtain Informed Consent

Any questions before we begin?

Record session

Sample probes as needed:
1. Can you tell me more?
2. Could you give me a specific example of that?
3. Can you explain your answer?
4. Why do you think that is?

Opening

I appreciate your willingness to share your time and expertise through this interview. The interview questions focus on explaining how you first become aware of and then interpret reading policy guidelines and the factors that promote or constrain reading policy implementation in alignment with reading policy goals in small rural schools. The interview should last 20–30 minutes and will be recorded and stored on a password protected web-based tool. There are no right or wrong answers and you may decline to answer a question or stop the interview at any time without consequence. You may see me take notes, it is my way of keeping myself on track with the interview questions. Any questions before we begin?
Interview Questions

1. What is your role in your organization?

2. How long have you served in this role?

3. How do you first learn of changes in policy guidelines or laws and rules intended to guide classroom instruction?

4. After you become aware of changes in policy guidelines, who or what helps you to interpret changes in policy guidelines.

5. Please describe how you communicate with others to interpret policy guidelines.

6. Please describe your interpretation of current reading policy guidelines.

7. How closely do your ideas about how reading develops and should be taught, line up with current reading policy guidelines?

8. How closely do you think other’s ideas about how reading develops and should be taught line up with current reading policy guidelines?

9. How have your responses and the responses of others to reading policies changed over time?

10. How would you describe the level of agreement between yourself and others about how reading develops and should be taught?

11. What factors and circumstances do you feel either prevent or help your ability to align instructional practices to policy guidelines?

12. Please describe the process your district uses to select and implement nude curriculums.

13. Is there anything else you would like me to know?

Closing

Thank you for sharing your time and expertise. Would you like to receive an abstract of the completed study?
Appendix O

The A Priori Codebook

<table>
<thead>
<tr>
<th>Code 1: Existing Reading Instruction Logic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code Description</strong></td>
</tr>
<tr>
<td><strong>Verbatim Illustrative Quote</strong> Principal: You know, our district uses Fountas and Pinnell as one of our reading policies … which is my bible.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code 2: Complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code Description</strong></td>
</tr>
<tr>
<td><strong>Verbatim Illustrative Quote</strong> Teacher: When I first started, eight years ago, it [the school’s reading logic] was … whole language and … I was like this is crazy, like they don’t even know their alphabet … yet, and I have to do that [whole-language instruction] first. Yeah … it was difficult.</td>
</tr>
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<table>
<thead>
<tr>
<th>Code 3: Sensemaking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code Description</strong></td>
</tr>
<tr>
<td><strong>Verbatim Illustrative Quote</strong> Teacher: So formally, we receive the text format of it [new policy guideline], and we sit down and we … read through it. We decide what that means, there’s a lot of kind of formal breakdown … what is this, what’s the expectation here, what do we expect it to be able to provide here? But then I think that there’s also a lot of just informal talk about like, well, what does this look like, what did this look like in the past, and how does this need to change? Now, you know, how are we going to adjust that for our purposes now? So yeah, I think it’s a lot of informal talk, probably more informal talk than formal.</td>
</tr>
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<table>
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<tr>
<th>Code 4: Institutional Work</th>
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</thead>
<tbody>
<tr>
<td><strong>Code Description</strong></td>
</tr>
<tr>
<td><strong>Verbatim Illustrative Quote</strong> Superintendent: [describing institutional work to create and to disrupt institutional logics] We are constantly monitoring legislation, monitoring trends. Looking at new bills that have been proposed and testifying against them or testifying for them.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code 5: Policy Coherence</th>
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</thead>
<tbody>
<tr>
<td><strong>Code Description</strong></td>
</tr>
<tr>
<td><strong>Verbatim Illustrative Quote</strong> Superintendent: It’s not just that there’s a difference between one school and another, even in each of the schools, things aren’t being done the same way. You can walk into one classroom, and one program is being used with emphasis, and something different [is used] in another. No alignment whatsoever.</td>
</tr>
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</table>
Appendix P

Joint Display to Facilitate Cross-Case Analysis

**Sensemaking**
Organizational sensemaking is a microlevel process triggered by complexity. Organizational sensemaking is described as a process “promted by violated expectations, that involves attending to and bracketing (framing) cues in the environment, creating intersubjective (collective) meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn” (Maitlis & Christianson, 2014, p. 67).

<table>
<thead>
<tr>
<th>Negative Extreme Deviant Case</th>
<th>Positive Extreme Deviant Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Belief that meaning emphasis instruction is legitimate</td>
<td>Belief that reading is the product of decoding and comprehension</td>
</tr>
<tr>
<td>2. Deficit thinking</td>
<td>2. Partial autonomy</td>
</tr>
<tr>
<td>3. Dunning-Kruger bias</td>
<td>3. Reading is the product of decoding and comprehension</td>
</tr>
<tr>
<td>4. Economic hardship</td>
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</tr>
</tbody>
</table>

**Deficit Thinking**
Using deficit thinking, educators blame children’s genetic predispositions and pre-school experiences within families and communities for early reading failure (Henderson, 2002).

Principal: “I’m not in the mood to really want to shift [current reading instruction logic] at this point because I know that it’s working.”

Me: “So you don’t go in and superimpose another view.”

**Literacy leader:** “Never, no.”

First grade teacher: “I just find the phonological piece is so important and teachers, they go right to phonics, and they’re not building [the foundation]. Its driving me nuts!”

Kindergarten teacher: “I do think that kids amazingly are able to learn to read with a variety of different strategies.”

**Literacy leader:** “We see their needs differently when you’re working with them in different lights in different areas, and different scenarios, their individual characteristics and learning styles come out different. It’s hard to communicate [with teachers] when you’re feeling differently.”

First grade teacher: “Some families don’t value [education] even though they say they do. It’s lip service. But what also has me nuts is that I have really able capable kids who don’t want to perform and don’t want to put it out and there’s no expectation at home to do it.”

Kindergarten teacher: “So I’m not sure that I completely agree with it [policy] … I’m not sure … in my deep heart, I agree with it, necessarily, because I’m not sure that some of these, especially I have some little males in my class, that are just not developmentally there.”

“We all know that not all of those skills can be met in every single child developmentally.”

**Dunning-Kruger Bias**
Failure to implement effective reading instruction emerges from ignorance, or a deficit of knowledge, and Dunning-Kruger bias, or an inability to detect ignorance (Dunning, 2011; Kruger & Dunning, 1999). Central to Dunning-Kruger bias are “unknown unknowns” or information that lies outside of an individual’s awareness and is therefore inconceivable (Dunning, 2011, p. 252).

Superintendent: “I would say one of the things is just the old habits of the staff, the way they’ve always done things and they feel it’s effective. They don’t see a need for change.”

Principal “But when you’re getting the results that you’re getting and you’ve got students that are really growing. At this point, I sort of fail to see the...
necessity to completely rip the thing out of the ground by the roots right and change it.”

First grade teacher: “I just find like the phonological piece is so important to [recently trained] teachers. They go right to phonics, and they’re not building [the foundation]. Its driving me nuts!”

Economic hardship
Difficulty caused by too little money and of too few resources (Cambridge, 2020).

Principal “This town is extremely frugal with how it spends its money. So if I’m going to spend its money-I better make really sure that what I’m purchasing has meaning and is really important and is being done for a really solid reason and can actually produce results because if it doesn’t, that’s not going to work.”

Literacy leader: “I do sometimes find it challenging to provide the best amount of support due to the lack of resources this school has just because of funding … and I don’t want to say we’re afraid to ask, but we know that funds are tight.”

Kindergarten teacher: “I think budget is a huge factor, with staffing, with intervention, with … being current, supplies that are current, I mean I know that we have books in the other room that are older than me.”

MetaInference
The cross-case analysis revealed that sensemaking in the ↓ negative extreme deviant case school emerged from and reproduced complexity. Conversely, in the ↑ positive extreme deviant case, sensemaking emerged from complexity, but reconciled complexity.

In the ↓ negative extreme deviant case, low reading policy coherence was linked with various sensemaking accounts constructed in disorganized factions to protect the existing reading instruction logic while disrupting the imposed reading instruction logic. Accounts were constructed strategically and disseminated selectively to manage external impressions of the existing reading instruction logic, contest the imposed reading instruction logic, vilify and reduce the power of proponents of the imposed logic, and to blame children, families, communities, and circumstances for early reading failure. Sensemaking accounts in the ↓ negative case school exonerated literacy educators from responsibility for improving reading instruction and reading achievement.

Conversely, in the ↑ positive case, a high degree of reading policy coherence was linked with effective leader sensegiving provided by the principal, literacy leader, and influential and respected expert literacy educators. Sensegiving featured a single privileged message and was guided, controlled, and animated, and conducted in planned, structured, and engaging meetings with the entire organization, in regularly scheduled small group interactions, and individually as needed. Literacy educators responded to sensegiving with the construction of a single unified account and a series of consistent actions. Sensemaking accounts in the ↑ positive extreme deviant case assigned responsibility for improving reading instruction and reading achievement to the reading instruction culture’s processes and practices.

Institutional Work
Institutional work is the “practices of individual and collective actors aimed at creating, maintaining, and disrupting institutions” (Lawrence et al., 2011, p. 53).

<table>
<thead>
<tr>
<th>Negative Extreme Deviant Case</th>
<th>Positive Extreme Deviant Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Entrepreneurs concerned with maintaining institutional logics</td>
<td>1. Collaborative cocreation</td>
</tr>
<tr>
<td>2. Fabrication</td>
<td>2. Cultural entrepreneurship</td>
</tr>
<tr>
<td>3. Oppositional Autonomy</td>
<td></td>
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<tr>
<td>4. Resistance</td>
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</table>

Entrepreneurs maintaining institutional logics
Refers to how interest driven individuals, groups, and organizations use mechanisms of framing, categorization, and storytelling to silence antagonists, protect their interests, and maintain the institutional order (Zilber, 2007, p. 1049).

Principal: “When I’ve got teachers who are willing to sign up for more training to keep going on this trajectory … and they all they all really learn to read well. And to me, and I just can’t say enough about that. It’s so well thought out cognitively, developmentally, and it has a place for every single student. And I think that’s the most important piece. And what I’ve noticed, the difference that I’ve noticed, for example, in watching teachers that teach with this model versus using different models, is that … they really have a sense of where they’re going and have a really deep understanding … at a granular level of what’s driving the learning.”

Principal: “Well, I think, as superintendent may not have the same thoughts as me. For instance, in our district right now, for the past three years, we have not had a language arts coordinator and that really bothers me because, we’re doing well in the reading, writing, aspect, but we’re going to have gaps … I struggle with that. And I pushed and pushed and pushed and our current superintendent is like, alright so we’re getting a humanities person … So I’ve really pushed for that because, I mean yes we’re doing well. We’re scoring well and I get that our superintendent is amazing. I absolutely think he’s phenomenal, but I have to remind him how important this is. And he’s like, but it’s not broken. Actually, it’s starting, it’s going, it has to, you know, we’re all not experts.”

First grade teacher: “When I first started, eight years ago, it [the school’s reading logic] was … whole language and … I was like this is crazy, like they don’t even know their alphabet … yet, and I have to do that [whole-language instruction] first. Yeah … it was difficult.”

“[I] go deeper in so to help them [teachers] understand.”

“We are training our teachers in Orton Gillingham practice. So we’re really giving them those foundations. My big thing, as I say, is that you cannot build a foundation out of sand. Because it’ll look great for a little while and then it’s going to crumble.”

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Fabrication
To fabricate is to make up for the purpose of deception (Merriam-Webster, 2020).

Principal:
• “And it’s really intensive and they’re well trained.”
• “But, so I feel that our phonics, all of that. All of that granular baseline work here is pretty strong. Its intensive.
• “And, central office really doesn’t have a problem with our reading program the way that we’re doing it.”
• “The jumps that they take in this program are phenomenal. I mean it’s amazing and with that being really, really strong and outcomes and they all they all really learn to read well!”

Oppositional Autonomy
“Involves openly confrontational and oppositional ‘legitimacy politics’ as when a leader wholly rejects the claims of some group” (Kraatz, 2009, p. 75).

Principal: “So we would look at what would be the best way to do that here for kids because basically our focus here is what’s best for kids. And if we felt that it was going to be too disruptive. We felt that this was the wrong time to introduce it, those would be things that we would decide in house here, and then make a case for it and take it to central office.”

“They want every individual school to be using the same thing but they can’t enforce it, because every school in the region is its own school district. I had a conversation, years and years ago, whenever I started teaching here, and the principal said it’s a beautiful thing because she said you can pull your district card. She said, when you feel you need to pull up the drawbridge. You can do it. And so there’s been a lot of that going on here the last few years.”

Resistance
To resist is to exert force in opposition (Merriam-Webster, 2020).

Superintendent: “Because each school has been so autonomous and principals are almost like in their own domain. They answer to their board. And … they say, we as principals are going to run our schools the way we want.”

Principal: “At this point, I have no intentions of changing [reading instruction]. I’ve been under a lot of fire to change it over … the past year and a half. And this is not broken. At this point, I don’t really see a need to fix it … At this point, I … fail to see the necessity to completely rip the thing out of the ground by the roots … and change it.”

“And so the individual schools … are really not feeling like they have a choice. And some of them have started to push back with their boards.”

First grade teacher: I think we would probably try to comply. I would be sick, but we have separate boards and I don’t think our board would make us do that.”

Literacy leader: “So we actually were trained, we had a group of teachers initially trained, three, four years ago … It was like a cohort, we were together and we were trained and then we decided that it was like a worthy program and we piloted it for the following year … So our PD money was all invested into this training, but it was more—it wasn’t like hands on, it was more of just the research and so now we’re investing more time with experts. So some people have moved on past a certification and are kind of coaches. So that’s where we’re at right now.”

“We have this nice block of time every morning at 8:25 that a lot of schools don’t have. So my role [is] to meet with teachers so I can add a schedule and had weekly meetings with each teacher. We also have like our PLC time where we can work, and as a specialist were able to kind of work with groups on an as needed basis. So if there’s something that the primary teachers need to hear, that would be my time to like get into their PLCs and we can talk about it as a group. [And] for an individual teacher, I would use my weekly meeting time.”

“We have a first grade teacher … she was trained initially with me. So … we consider her one of the experts in the OG model and another first grade teacher may come and just watch her workshop to see how she’s implementing or I may go over and watch the special ed teacher that had more training.”

First grade teacher: “What helps is when you feel the support you know from your admin or from your colleagues, but it doesn’t help us when you get the resistance. You know, like … they’re not willing to learn it or they’re not willing to try it. Or it’s just not the right time … so I’ve learned to say … you know what, maybe now’s a great time. But just sprinkling … the seeds or like … and then showing a little bit of an example maybe in a week or two, or a month or two, it will come.”

“So, at times … I’m always like the cheerleader [and say] we’ll just try it!”

“Our special ed teacher … has a lot more training in this multi-sensory approach [Orton Gillingham] … with a lot more hours-so she brings it to us and we have … professional development days like for eight hours, and it was phenomenal. Not just theory, but like how to build it, how to incorporate it into your classroom.”

Kindergarten teacher: “I really appreciate that they are viewing the research sources they have within the district as valuable and important. And so we’re using each other for our professional development with a sprinkling of outside site stuff as needed. But I really love that.”

Cultural Entrepreneurship
Cultural entrepreneurship refers to how individuals, groups, and organizations use mechanisms of framing, categorization, and storytelling to facilitate understanding, justification, and legitimation of an innovation (Lounsbury & Glynn, 2001).

Superintendent: “We are constantly monitoring legislation, monitoring trends. Looking at new bills that have been proposed testifying against them testifying for them.”

Principal: “I do a lot online just to make sure I’m understanding what policy is what it is that I have to implement it and then because I have to understand that to bring it to my teachers and make sure they understand.”

Literacy leader: “What’s nice is we’re also able to go to other schools [with] something that we feel like an expert [in] at this point.”

Me: “You spoke about the, the greater push towards explicit phonics instruction. Was that a policy that came down, or is that something that emerged from your school team?”

First grade teacher: “Emerging from our school team and a lot from our administrator [principal] because she has a background in reading and that’s like her specialty. So I think [it is] what we’ve been saying, as a group, you know, especially in the primary and then like even the upper grades.”

MetaInference
As with sensemaking, the cross-case analysis revealed that institutional work in the ↓ negative extreme deviant case school emerged from and reproduced complexity. In the ↓ negative case, institutional work was defensive and coalesced to decouple (separate) the operational structures of the existing reading instruction logic, or “how we do things around here,” from the prescriptive and normative structures of the imposed reading instruction logic.

Conversely, in the ↑ positive extreme deviant case, institutional work also emerged from complexity but coalesced to combine two competing internal logics, the preexisting meaning-emphasis reading instruction logic and the imposed code-emphasis reading instruction logic. In the ↑ positive case, literacy educators continually interpreted reading policy and engaged in strategic coupling (combining) activities to attain reading policy coherence. Combining institutional logics leads to a new hybrid logic, in this case, balanced reading instruction, and eliminates complexity.
Appendix Q

Example of Completed Rubric Indicator 1.1 for Fountas and Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching

(Fountas & Pinnell, 2017)

Indicator

1.1 Materials include guidance to provide small group, differentiated instruction to students struggling with reading development [RTI practice guide].

Result

2. Indicator partially met

Reviewers should select a rating of 2, indicating the criterion was partially met, if the instructional materials address only part of the criteria of the indicator or if an attempt is made to meet the criteria but at times the materials fail to do so.

Recommendation 1. Screen all students for potential reading problems at the beginning of the year and again in the middle of the year. Regularly monitor the progress of students who are at elevated risk for developing reading disabilities.

1. Create a building-level team to facilitate the implementation of universal screening and progress monitoring.

2. Select a set of efficient screening measures that identify children at risk for poor reading outcomes with reasonable accuracy.

3. Use benchmarks or growth rates (or a combination of the two) to identify children at low, moderate, or high risk for developing reading difficulties.

Recommendation 2. Provide differentiated reading instruction for all students based on assessments of students’ current reading levels (tier 1).

1. Provide training for teachers on how to collect and interpret student data on reading efficiently and reliably.

2. Develop data-driven decision rules for providing differentiated instruction to students at varied reading proficiency levels for part of the day.

3. Differentiate instruction—including varying time, content, and degree of support and scaffolding—based on students’ assessed skills.

Recommendation 3. Provide intensive, systematic instruction on up to three foundational reading skills in small groups to students who score below the benchmark on universal screening.

Support Rating:

Materials include guidance for differentiated Tier 1 instruction only.

Note: Schools report using the Fountas & Pinnell Literacy Continuum, a Tier 1 curriculum, and do not report using a separate supplementary curriculum developed by the same authors, Leveled Literacy Intervention, a Tier 2 curriculum. Neither curriculum addresses Tier 3.

Recommendation 1: Teachers using the Fountas & Pinnell Literacy Continuum do not collect, organize, interpret, or report data on students’ reading skills. The developer recommends using Fountas & Pinnell Benchmark Assessment System to determine the appropriate independent and instructional levels for each student and does not recommend collecting data surrounding students’ foundational reading skills or reading problems. The two-part Fountas & Pinnell Benchmark Assessment System assessments are conducted one-on-one. In Part 1 of the assessment, Oral Reading, the student reads aloud and talks about the system’s original, precisely leveled fiction and nonfiction books while the teacher observes and notes the reader’s behaviors on carefully constructed Recording Forms. In Part 2, the teacher conducts a revealing Comprehension Conversation. In optional Part 3, the student responds to the text using a Writing About
Typically these groups meet between three and five times a week for 20–40 minutes (tier 2).

1. Use a curriculum that addresses the components of reading instruction (phonemic awareness, phonics, vocabulary, comprehension, and fluency) and relates to students’ needs and developmental level.

2. Implement this program three to five times a week, for approximately 20 to 40 minutes.

3. Build skills gradually and provide a high level of teacher-student interaction with opportunities for practice and feedback.

**Recommendation 4.** Monitor the progress of tier 2 students at least once a month. Use these data to determine whether students still require intervention. For those still making insufficient progress, school-wide teams should design a tier 3 intervention plan.

1. Monitor progress of tier 2 students on a regular basis using grade appropriate measures. Monitoring of progress should occur at least eight times during the school year.

2. While providing tier 2 instruction, use progress monitoring data to identify students needing additional instruction.

3. Consider using progress monitoring data to regroup tier 2 students approximately every six weeks.

**Recommendation 5.** Provide intensive instruction daily that promotes the development of various components of reading proficiency to students who show minimal progress after reasonable time in tier 2 small group instruction (tier 3).

1. Implement concentrated instruction that is focused on a small but targeted set of reading skills.

2. Adjust the overall lesson pace.

3. Schedule multiple and extended instructional sessions daily.

4. Include opportunities for extensive practice and high quality feedback with one-on-one instruction.

5. Plan and individualize tier 3 instruction using input from a school-based RtI team.

6. Ensure that tier 3 students master a reading skill or strategy before moving on.

---

**Reading prompt.** The developer advises conducting a benchmark assessment at the beginning of the year and states that teachers may want to conduct midyear and end of year assessments but that they are unnecessary because teachers conduct ongoing running records in guided reading groups.

**Recommendation 2:** Following assessment and identification of reading level, students are grouped into guided reading groups. Guided reading is a Tier 1 instructional approach.

**Recommendation 3:** The Tier 2 instructional approach, Leveled Literacy Intervention, is sold separately from the Tier 1 curriculum, The Fountas & Pinnell Literacy Continuum. The developer does not sell a Tier 3 curriculum. Curriculum advisors suggest that the Leveled Literacy Intervention can be implemented twice a day for 30 minutes to meet the needs of Tier 3 students.

**Recommendation 4:** Teachers using The Fountas & Pinnell Literacy Continuum do not collect, organize, interpret, or report data on students’ reading skills or problems.

**Recommendation 5:** The developer does not sell a Tier 3 curriculum. Curriculum advisors suggest that the Leveled Literacy Intervention can be implemented twice a day for 30 minutes to meet the needs of Tier 3 students. Materials do not provide guidance to provide small group, differentiated instruction to students struggling with reading development. The developer asserts that in well-designed classroom instruction, teachers use assessment information from the Fountas & Pinnell Benchmark Assessment System and The Continuum of Literacy Learning to differentiate instruction in a way that meets all students’ needs in Tier 1.
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EDUCATION

Johns Hopkins Graduate School of Education, Baltimore, MD 2020
Ed.D.
Course Specialization: Entrepreneurial Leadership in Education
Dissertation Focus: Coherence of Reading Policy Goals and Institutionalized Reading Instruction Practices in 16 Small Rural Schools in Connecticut: A Mixed Methods Comparative Case Study

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