

Highway to reform: The coupling of district reading policy and instructional practice

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Abstract This article presents findings on teachers' implementation of a reading reform in an urban school district. Findings are based in observation, interview, and document data related to 12 elementary teachers' responses to a new reading program, the Teachers College Reading and Writing Workshop. Utilizing coupling theory and the concept of routines, the paper presents a nuanced portrayal of classroom-level policy implementation. The paper depicts mini-lessons, independent reading, conferencing, and instructional materials as building blocks of the new reading program, and I expose the intensity of messaging on each of these elements. I use Qualitative Comparative Analysis to analyze teachers' routines for reading instruction and show that independent reading was a common foundational step in teachers' workshop routines. This analytic technique answers questions about the combinations of conditions resulting in mini-lesson instruction. This paper extends the research on the implementation of instructional policy and has implications for policymakers, administrators, and teachers.

Keywords Educational infrastructure · Reading instruction · Coupling theory · Qualitative methods · QCA

Introduction

Contemporary standards-based reform efforts promote unified instructional goals (Hiebert and Mesmer 2013; International Reading Association 2012; National Governors Association 2009). In the United States, the English Language Arts Common Core State Standards “hinge on students encountering appropriately

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complex texts at each grade level in order to develop the mature language skills and the conceptual knowledge they need for success in school and life”. As a consequence, teachers are under pressure to change their approach to literacy instruction. However, these instructional reforms are challenging to carry out. This is due, in part, to flaws in educational infrastructure (Cohen 2011; Cohen and Bhatt 2012). Cohen (2011) emphasizes that, overall, the US has neglected to construct a “common and unifying infrastructure for schools.” A well-designed infrastructure would not only lay out a curriculum for teachers, but it would also provide context-specific support so teachers learn how to teach it. In this way, a coherent educational infrastructure would enable the generation of collective knowledge and skills around teaching and learning. This infrastructure could shape the nature and quality of classroom practice.

It is necessary to assess the types of infrastructure that enable or facilitate instructional reform. Cohen (2011) acknowledges that “recent federal and state policies have tried in some respects to break this pattern” of poor infrastructure (p. 60). In particular, over the past two decades, accountability policies have attempted to advance systemic approaches to reform—with standards, curricula, and standardized tests as major ingredients (Mintrop and Trujillo 2007; Smith and O’Day 1990). And, standards, curricula, and assessments are components of infrastructure with the potential to influence what is taught and how teachers instruct their students (Anagnostopoulos and Rutledge 2007; Booher-Jennings 2005; Diamond 2007; Hoffman et al. 2001). Yet, despite these systemic reform efforts, there remains a gap between instructional policy and classroom practice (Coburn 2004; Coburn and Woulfin 2012; Diamond 2007).

One explanation for the persistence of this gap is that the infrastructure to support instructional improvement has been neglected by both practitioners and researchers. First, it is challenging for administrators and teachers to assemble coherent infrastructure. Accountability policies from multiple levels of the education system ask educators to take on changes moving in different directions. Therefore, practitioners must cope with numerous, simultaneous policies, reforms, and initiatives (Coburn 2004; Cohen and Bhatt 2012). These policies use a variety of instruments to promote change (McDonnell and Elmore 1987). And, critically, the principles and practices espoused by these policies may clash. Second, many questions remain about how teachers respond to infrastructure and its various forms of instructional guidance. Specifically, how do policy messages emphasize different components of reading instruction? And what accounts for various patterns of classroom-level implementation of reading reform? The answers to these questions would permit the development of an educational infrastructure that could support teacher development and scaffold instructional change.

Organizational theory provides a lens for analyzing how teachers respond to ideas regarding policy (Coburn 2006; Diamond 2007; Hallett 2010; Spillane and Burch 2006). Within this broader theoretical lens, in this paper I draw on coupling theory, from neo-institutional theory, to attend to the numerous ties among the policy environment and reading instruction. I explore how different elements of a new reading program were taken up by first and third grade teachers in an urban school district, finding that teachers enacted routines for reading instruction that

reflected the district's policy in certain ways based on the intensity of the policy messages they received. By revealing the relationship between a school district's formal reading policy and teachers' classroom practice, this article reveals the ways in which various infrastructure components focused on reading instruction worked to couple reading policy and practice.

Literature review

Scholars and reformers bemoan the infrastructure of the United States' education system (Cohen 2011; Cohen and Moffitt 2009; Tyack 1974). The fragmentation and incoherency of this system is oftentimes attributed to the division of power and authority among the federal, state, and local levels (Cohen and Moffitt 2009; Tyack 1974). There is a great deal of discourse regarding the impact of inadequate infrastructure on instructional improvement efforts, educational outcomes, and equity. Despite these serious structural concerns, recent studies illuminate that policy can reach schools and teachers (Coburn 2004; Diamond 2007). For example, Diamond's (2007) study on the consequences of accountability policy in urban schools found that the content of instruction is more amenable to change than the pedagogy of instruction. This research indicates that certain aspects of teaching are more malleable than others. In the field of implementation, scholars have shown how reading programs promoting different approaches to literacy instruction are associated with different patterns of instruction (Correnti and Rowan 2007). Specifically, two Comprehensive School Reform models, Success for All and America's Choice, placed weight on decoding and writing to differing degrees, and Correnti and Rowan's (2007) findings indicate that schools implementing each model displayed significantly different patterns of literacy instruction. While these quantitative studies on implementation permit us to see large-scale patterns, they obscure the mechanisms by which teachers enact—or reject—instructional policy. Additional research is needed on the microprocesses of implementation, including how teachers engage with policy and enact it through their instruction.

In this paper on the relationship between a district's reading reform and teachers' classroom practice, I utilize coupling theory and the concept of routines. These theories enable me to ascertain how teachers' instructional activities reflected aspects of reading policy. First, coupling theory is concerned with the linkages between the policy environment and activities within organizations (Burch 2007; Coburn 2004; Hallett 2010). Scholars who employ this theory are concerned with the gap between policy and practice. Within the field of education, this theory has been used to ascertain when and under what conditions educators' work reflects ideas from the macro-level environment (Coburn 2004; Diamond 2007). Second, the concept of routines attends to individuals' repeated practices within their organizational context (Feldman 2000; Feldman and Pentland 2003). The literature on routines illuminates the context, characteristics, and consequences of repeated work practices (Feldman and Pentland 2003).

Coupling theory

Neo-institutional theory conceptualizes the institutional environment and its relationship with the technical core of organizations (Scott 2001; Spillane and Burch 2006). This theory is well known for its attention to the linkages, or *couplings*, between pressures in the environment and activities occurring within organizations (Orton and Weick 1990; Spillane and Burch 2006; Weick 1976). The concept of coupling attends to the tight-versus-loose relationship between the environment's ideas and actions on the ground (Meyer and Rowan 1977; Weick 1976). In the field of education, this concept aids the analysis of the relationship between the policy environment, including ideas and rules from the federal, state, and district levels, and teachers' instruction in schools (Coburn 2005; Diamond 2007; Spillane and Burch 2006). And in studies of implementation, coupling theory can be applied to grapple with the complex relationship between policy and practice. For example, Coburn (2004) presents teachers' responses to reading policy messages and characterizes the range of responses—from accommodation and assimilation to the creation of parallel structures and rejection. The intensity and regulativeness of policy messages affect teachers' contact with and learning about policy, thereby influencing their enactment (Coburn 2004). Additionally, an educator's connection to segments of the environment can shape patterns of implementation (Coburn 2004; Coburn and Woulfin 2012; Rigby 2013).

While employing the concept of coupling, it is imperative that scholars attend to the variegated couplings between policy messages and different elements of instruction (Orton and Weick 1990). This study builds upon existing scholarship by exploring how components of the educational infrastructure couple policy and practice (Coburn 2004; Hopkins et al. 2013). Specifically, I highlight the variable connections between formal policy and classroom practice. This use of coupling theory enables me to reveal how teachers are taking up some elements of a district reading program, while rejecting others. Furthermore, this use of coupling theory helps surface findings on the role of infrastructure in coupling policy and practice.

Routines theory

While coupling theory affords a framework for examining the relationship between ideas and practices, it offers fewer tools for analyzing actors' work (Fligstein 2001; Hallett and Ventresca 2006). The theory of routines zooms in on individuals' repeated actions. Scholars define *routines* as “repetitive, recognizable patterns of interdependent actions” (Feldman and Pentland 2003, p. 95) serving as sources of both organizational stability and change (Feldman 2000). Pentland and Feldman (2005) explicate that “routines consist of many performances of patterns of actions. These routines are performed by specific people, at specific times, and in specific places for specific reasons” (p. 802). It is necessary to note that individuals do not have to perform routines in lock step; there is room for change and learning throughout the enactment of routines (Orlikowski 1996). This paper utilizes routines theory to analyze classroom practice. Specifically, I conceptualize reading

workshop as a routine that teachers perform through their interactions with students and engagement with the content of the district policy.

Scholars who draw on routines theory frequently analyze the characteristics of enacted routines, comparing performances of routines across settings (Pentland and Feldman 2005). For instance, Spillane et al. (2011) portrayed data analysis routines in an elementary school encountering accountability pressures. These scholars paid close attention to the activities of school leaders, including the principal and literacy coordinator, in carrying out the routine. In this way, this line of research attended to the internal structure of data analysis routines, as well as actors' interactions while carrying out the routine.

In the field of education, routines theory can enable the exploration of organizational routines and also instructional routines. For this paper, I employ analytic techniques grounded in routines theory to compare and contrast teachers' enactment of a new district reading policy; I carry out *routines-analysis* to explore how teachers implemented the four building blocks of reading workshop. My study examines instructional routines, presenting findings on the instructional practices of teachers as they implement a district reading reform. Therefore, this utilization of theory and *routines-analysis* help me illuminate findings on the infrastructure for ambitious reading reform to address the following research questions:

1. To what extent do teachers implement the four building blocks of reading workshop?
2. To what extent does the intensity of policy messages influence the coupling between the reform's ideas and classroom practice?
3. What combinations of building blocks are associated with teachers' enactment of mini-lessons?¹

Method

This paper reports findings from an in-depth, qualitative case study of a district's implementation of a reading program during the 2010–2011 academic year (Creswell 1998; Yin 2009). The case study approach is well suited for investigating complex social phenomena because it permits the exploration of the context and conditions surrounding the phenomenon (Creswell 1998; Crotty 1998). To determine how the district's reading policy was translated into 12 first and third grade classrooms, I obtained multiple forms of data on the reform, teachers, and instruction.

¹ The mini-lesson was selected as the outcome of interest based on the extant literature; please see the "Findings" section for details.

District sample

I gathered data in one purposively-sampled district to enable a close analysis of its reform process. I selected Lincoln Unified,² a medium-sized urban school district in California serving approximately 3600 students across 11 public elementary schools. The district's student body was diverse: 26 % African American, 18 % Hispanic or Latino, 8 % Asian, and 31 % white. Approximately 40 % of students qualified for free and reduced lunch. The district was in Year 3 of Program Improvement and faced pressures from state and federal accountability systems because subgroups (i.e., English Learners and Special Education students) were not meeting specified goals.

In August 2010, this district launched a reform that involved implementing Teachers College Reading and Writing Project (TCRWP) for reading instruction in all of its elementary schools. The program's approach to reading instruction used the instructional techniques of mini-lessons, independent reading, and conferencing to develop engaged, proficient readers (Calkins et al. 2010). District and school leaders, including the Assistant Superintendent for Curriculum and Instruction and coaches, were deeply committed to this new program. The district allocated substantial funding to hire trainers from Teachers College to lead a five-day, districtwide professional development session and to purchase instructional materials, including trade books for all teachers' classrooms.

I purposively sampled three of the district's lower performing elementary schools: Linden, Davis, and Taylor (Creswell 1998; Miles and Huberman 1994). As indicated in Table 1, about 50 % of Linden's students qualified for free or reduced-price lunch, and half of the students were students of color. The school had recently made large gains in its Academic Performance Index and was striving to reach the state's benchmark of 800. The school's principal focused on intervention programs, and its literacy coach was skillful in data-based decision making. Davis Elementary was similarly diverse, serving over 50 % students of color. With the lowest Academic Performance Index (API) of the three focal schools, Davis was under significant pressure to raise its API. The school's principal tended to focus on managerial rather than issues instructional issues. The coach strongly promoted standards based instruction and test preparation activities, and she led numerous trainings for teachers. Finally, Taylor was the highest performing of the three elementary schools. In comparison to the other focal schools, Taylor enrolled a greater proportion of African American students. Taylor's principal conducted classroom walkthroughs and monitored teachers' lesson plans. The school's coach devoted time to supporting teachers within their classrooms, including co-teaching reading lessons.

Teacher sample

I sampled first and third grade teachers working within each of the three schools. Collecting data in both first and third grade classrooms permitted me to compare the

² Lincoln Unified is a pseudonym to maintain the confidentiality of the district.

Table 1 Demographic information on focal elementary schools

School	Enrollment (# students)	Students qualifying for free/reduced lunch (%)	Students of color (%)	2010 California Academic Performance Index	Bilingual Program
Linden	407	52	50	797	Yes
Davis	299	55	51	763	Yes
Taylor	316	44	46	851	No

implementation of the reform at those distinctive grade levels, which focus on different elements of reading. Specifically, first grade emphasizes decoding instruction so students learn how to read, while third grade gives more attention to comprehension in the transition toward reading to learn (Pressley et al. 2001)³. In addition, I hypothesized that first and third grade teachers would respond differently to the reform because these grade levels are differentially linked to the state's policy apparatus. While first grade is an untested grade level, third grade participates in California's standardized test program.

I collected data on twelve teachers in three sampled elementary schools. In each school, I sampled two first grade teachers and two second grade teachers. Most of the teachers in this study were relatively experienced; 9 of the 12 teachers had greater than 5 years of teaching experience. However, 2 of the 12 teachers were first-year teachers. Eleven of the 12 sampled elementary school teachers were female, and 9 of the 12 teachers were white. At Linden and Davis Elementary, there were two teachers at each grade level who taught reading workshop in English. At Taylor Elementary, all three teachers in each grade level taught in English. So, after asking the coach, teachers, and the principal about teachers' experiences with the new reading program, I sampled two teachers from each grade level. Two teachers were excluded: a long term substitute and a veteran teacher who declined participation in the study.

Data collection

As part of a larger study of coaching, I collected and analyzed observation, interview, and document data over a thirteen-month period.

Observations

I observed teachers' reading instruction to obtain data on the relationship between the district's reading reform and teachers' classroom practice. Over the course of the 2010–2011 school year, I observed English language arts instruction in 12 first and third grade classrooms. I conducted 38 total classroom observations; each

³ <http://www.readingrockets.org/article/41>
http://www.gse.harvard.edu/~snow/Aspen_snow.html.

observation was approximately 60 min. I visited each classroom during the fall, winter, and spring, enabling me to observe teachers three times over the course of the school year.

During observations, I focused on how teachers were adopting practices related to policy messages about reading instruction. I took ethnographic field notes describing the content and pedagogy of teachers' instruction (Diamond 2007; Lofland and Lofland 1995). First, the content of reading instruction involved what skills, strategies, and standards teachers were presenting. Second, the pedagogy of reading instruction involved how teachers structured instruction and their particular methods of instruction.

My field notes included information on how the teacher was addressing the primary components of TCRWP: mini-lessons, independent reading, conferencing, and use of the program's instructional materials. I noted the topic of teachers' mini-lesson; this helped me see patterns in the content that teachers were covering. I also noted whether or not there was evidence that the teacher was following TCRWP's instructional materials. For example, if I saw a teacher referring to the Units of Study teachers' guide before, during, or after a lesson, that served as evidence that the teacher's instruction was guided by the instructional materials. I noted the time allotted for independent reading and judged the class' engagement level for the independent reading activity. If the teacher conducted reading conferences with students during the workshop block, I shadowed the teacher during his or her conferences, noting the content of his or her meetings with students.

Interviews

I also conducted semi-structured interviews with teachers, coaches, principals, and district administrators to gain an understanding of the reading reform and teachers' responses to the reform. In the teacher interviews, I asked the 12 focal teachers about their perceptions regarding workshop and the practices that I'd observed. For example, what led a teacher toward a mode of instruction (e.g., whole class, direct instruction) or type of instructional material? I also asked teachers about their understanding of the reading reform as well as where they heard about the reading reform. In total, I interviewed 29 educators who engaged with Lincoln Unified's reading reform. All interviews were digitally audio-recorded and transcribed.

Documents

Finally, with the aim of characterizing reading policies, I gathered and analyzed 171 documents on reading instruction from the district and schools. The documents ranged from the state's framework for English Language Arts and materials from district-sponsored professional development sessions to memos from coaches on how to prepare students for the state test. Of the 171 documents, 76 documents were from the three elementary schools, 72 were coach-created documents, and 23 were from districtwide professional development sessions. These documents were replete with policy messages about appropriate ways to teach reading and provided me with information on the structure of the district's reading reform and the ideas which

were emphasized to teachers. I identified 344 policy messages (Coburn and Woulfin 2012). Each policy message specified how teachers should or must teach reading. For example, teachers received a message in the summer professional development session to teach mini-lessons on how to deal with unknown vocabulary in a text. Teachers also received a packet from coaches during a fall professional development that included data on the district's achievement gap in reading. Taken together, these documents provided evidence on the ideas present in the district.

Data Analysis

For this study, I used the analytic techniques of coding, creating matrices, writing memos, and Qualitative Comparative Analysis (QCA). I systematically coded interview transcripts and observation field notes in NVivo8. I carried out multiple rounds of inductive and deductive coding and created 38 nodes in the data analysis program (Creswell 1998). For instance, I applied codes related to state policy, elements of reading instruction (e.g., decoding and comprehension), and teachers' beliefs about the new program. I also coded 344 reading policy messages in an Excel file. These messages were coded for the source of the message (e.g., professional development facilitator versus coach versus teacher leader), the content of the message (e.g., reading comprehension versus spelling), and the regulation attached to the message (Coburn 2004).

While reviewing field notes on teachers' reading instruction, I identified reading workshop routines. Each workshop routine contained particular instructional techniques and stands as one unit, or case, of instruction. The routine was bound by the beginning and end of teachers' reading block.⁴ I identified 36 workshops from the three focal schools. To systematically and rigorously analyze patterns, I then inputted these workshops into an Excel data table. I conducted deductive coding along nine dimensions of TCRWP's principles and practices. For instance, I coded each reading workshop for whether it was aligned with TCRWP's instructional materials. After coding each of the workshops along multiple dimensions, I tabulated the proportion of workshops with various characteristics and created graphs to visualize differences among practices. For example, I graphed the proportion of teachers' workshops that included a mini-lesson or an independent reading period.

With the aim of determining the combination of conditions associated with a select outcome, I employed QCA (Cress and Snow 2000; Ragin 2008). QCA is an innovative technique for analyzing implementation patterns, particularly in the context of schools as organizations (Trujillo and Woulfin 2014). This form of analysis uses Boolean algebraic techniques to compare different combinations of categorical variables across cases and to put together models of the conditions associated with a particular outcome (Ragin 1992; Trujillo and Woulfin 2014). QCA permits researchers to precisely analyze between 8 and 120 cases (Ragin 1992). The technique reveals the bundle of factors, or co-conditions, associated with an outcome. I ran the coded data on the 36 cases of reading workshop through the

⁴ I checked with teachers, coaches, and principals to ensure that I was observing an appropriate block of time.

Fuzzy Set Qualitative Comparative Analysis (fsQCA, Version 2.0) program (Ragin et al. 2006). Each workshop was coded along nine dimensions, including presence or absence of mini-lessons, independent reading, conferences, standards-based instruction. This program outputted tables with the combination of conditions associated with mini-lessons, which was the selected outcome and provided consistency scores and coverage values for each combination. Then I was able to consider and re-analyze qualitative data on the most common combinations of conditions resulting in a mini-lesson.

The next stage of analysis involved creating matrices to compare cases, enabling me to track distinctions among schools and classrooms (Miles and Huberman 1994). For example, I made a table with information on how each teacher used the new instructional materials and assessments. To track themes during data collection, I wrote memos addressing issues arising from the data, such as how the nature of reading instruction differed across schools. Throughout analysis, I considered how one source of data matched with data from other sources, such as the degree to which formal policy documents aligned with what teachers described as important components of the reform. While coding, creating matrices, and drafting descriptive, analytic, and reflective memos, I remained attuned to disconfirming evidence (Miles and Huberman 1994).

Findings

Teachers enacted routines incorporating various components of the new reading program (e.g. independent reading, mini-lessons, and conferences with students). On the one hand, teachers received sets of policy messages defining the formal, *ostensive* routine. The ostensive routine asked teachers to follow the instructional materials' ideas for mini-lessons, provide time for independent reading, and conference with students. On the other hand, the *performative* routine was how teachers actually conducted reading instruction (Feldman and Pentland 2003). In short, the performative routine was the on-the-ground, enacted policy.

To advance our understanding of the relationship between infrastructure and practice, I analyzed 12 teachers' performative routines of reading instruction. These routines reflected ideas from the district reform, indicating that classroom practice was coupled with the policy in particular ways. However, only a few teachers enacted the full complement of the program pillars: mini-lessons aligned with the program's instructional materials, independent reading, and conferences. Strikingly, several teachers solely incorporated independent reading as their workshop routine. This means that, in some classrooms, teachers were not actively teaching reading on a daily basis. Taken together, there was considerable variability in the structure and features of reading workshop.

Building blocks of reading workshop

Similar to other reform efforts, Lincoln Unified's reading policy directed teachers to enact particular instructional methods and follow specific instructional materials.

Teachers were asked to implement multiple components of TCRWP. Therefore, it is necessary to determine the extent to which teachers implemented each of its components. To do so, I identified the key components, or *building blocks*, of TCRWP: (1) mini-lessons; (2) use of instructional materials; (3) independent reading; and (4) conferences. In this model of reading instruction, the workshop should be initiated by a brief, teacher-led mini-lesson. The program’s instructional materials provided guidance on the structure and content of mini-lessons. These mini-lessons should be followed by students engaging in independent reading for approximately 30 min. During the independent reading period, the teacher circulates, carrying out one-on-one conferences with students.

In many ways, the architecture of workshop, as part of the district reading reform, was supposed to remain stable week to week and across grade levels. Kindergarten through fifth grade teachers were expected to consistently deliver explicit mini-lessons aligned with the program’s instructional materials, provide time for independent reading, and carry out conferences with students. Thus, although the learning objectives for reading workshop change across grade levels and throughout the school year, this reform stipulates that “many aspects of the teaching of reading will not evolve over the year but will, instead, remain consistent” (Overview, First Grade, p. 1). As a first step towards revealing the coupling of the reform to classroom practice, I define each of the four building blocks and then share the extent to which it was taken up by teachers.

Mini-lesson

In mini-lessons, teachers present “direct and explicit strategy instruction” on comprehension, decoding and accuracy, or fluency (Overview of the Year for First Grade Readers 2010, p. 1). The workshop mini-lesson “rallies children’s commitment and sense of purpose, and it instructs them in the essential reading skills” (Overview of the Year for First Grade Readers 2010, p. 1). Trainings and instructional materials specified that mini-lessons should be about 10 mins long and

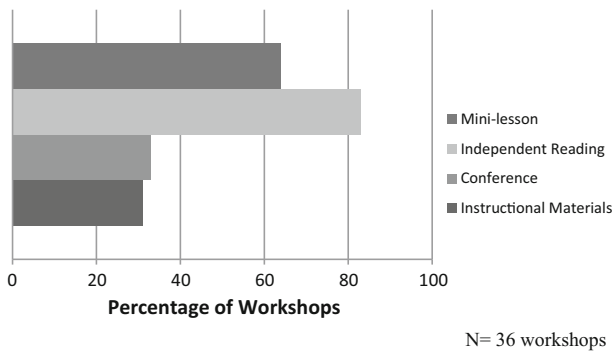


Fig. 1 Implementation of building blocks in workshop routines

should include an explicit teaching point, as well as a demonstration of what students will learn to do. Nick, the district's lead coach, stated:

There has to be some brief direct instruction in some key areas in reading, spelling and studying of vocabulary and in writing. And then the instructions should be brief and clear and then followed up by lots of independent practice....We'll give you some little lessons in the beginning to get you [students] something new to think about, something new to try.

Figure 1 presents the proportions of observed reading workshops that included each building block, revealing the extent to which teachers across Lincoln Unified incorporated aspects of Reading Workshop into their routines. Sixty-four percent of observed workshops included mini-lessons on reading strategies and skills (e.g., how to analyze a character's emotions or how to figure out the meaning of a new word). A third grade teacher expressed, "I really did a fraction of all of the lessons that are in the units that we've covered." In fact, 2 of the 12 teachers did not teach a mini-lesson during any of their observed workshop periods. This is striking if we treat mini-lessons as a time to provide direct instruction on new material for students.

Instructional materials

Instructional materials were intended to guide the scope and sequence of mini-lessons. Curriculum functions as one pillar of educational infrastructure. District administrators, principals, and coaches recommended that teachers use the instructional materials, particularly as a source of mini-lesson objectives with a series of critical teaching points. The district's reading plan stipulated that grades K-2 teachers teach the Units of Study in Growing Readers, while grades 3-5 teachers commit themselves to teaching the first three Units of Study by Calkins this year. These materials contained a scope and sequence for reading instruction and also included sample 'scripts' for teacher and student talk in Workshop. The principal of Linden Elementary declared that

the district expects all teachers to implement it. But when you look at "it", it is a big thing of books. And when you really start to read "it", and when you have all those books for every grade level, there's quite a bit to it.

This indicates that the district required teachers to adopt the program's array of instructional materials, and this principal acknowledged the new materials' complexity.

Despite the reading plan's directive for teachers to teach the objectives and lessons from the TCRWP instructional materials, teachers only followed the materials in 31 % of workshops. Leah, a third grade teacher, stated that

I've been taking bits and pieces. Like, I'm not using the nonfiction unit as part of these planet reports that I'm having the kids do. So I'm not following the teachers' manual, but I took some, I lifted something. I've been picking and choosing from that [Units of Study].

In this way, teachers adapted the new instructional materials. Five of the 12 teachers only occasionally used the Calkins lesson plans. Thus, instructional materials had relatively low levels of use. It is evident that, in comparison to other building blocks, teachers' use of instructional materials was only loosely coupled to the district's policy messages.

Independent reading

TCRWP hinges on the proposition that reading workshop should include extended periods of time for students to engage in independent reading. The summer professional development materials declared that "the most important part of a reading workshop is the actual reading time" (Overview, First Grade, p. 2). Robin, a first grade teacher at Taylor Elementary, described independent reading as an activity in which

they [students] go and they have time in independent reading where they're reading books. This is also another really important part, reading books at their own level for a sustained period of time. So they have their book boxes where they read books at their own level...by themselves.

Independent reading can also play a structural role because it frees up the teacher to move around the room, observing students' reading and conferencing with students on their reading.

Overall, 83 % of workshops devoted time for independent reading (see Fig. 1). Across the board, there were high levels of implementation of independent reading. In most first and third grade classrooms, the independent reading period appeared to be tranquil—with the majority of students staying seated and engaging in some manner with their district-provided leveled books. Students' willingness to engage in independent reading appeared to play a role in encouraging teachers to adopt this building block. Several teachers, reported that students were enthusiastic about independent reading. For example, Eli, a third grade teacher, said that "they [students] love reading. They are able to engage in a book of their own choice for a long period of time." Sometimes students cheered when their teacher announced the beginning of the independent reading period. In sum, teachers incorporated independent reading as an instructional activity with relative ease.

Conferences

Conferences involve teachers conducting one-on-one or small group reading instruction while the majority of the class' students engage in independent reading. It is important to note that this building block represents a shift away from guided reading, the district's previous method for differentiation. Nick described how, while implementing this building block

The teacher comes around and conferences with kids. You know, tell me about what you're reading so far. Oh, that's interesting. What do you think might happen next? Could you read a little passage to me? And then the teacher's

thinking alright, sounds pretty fluent, the child is reading in phrases, that's good...

Nick's depiction of conferences as a formative assessment method lays out how teachers should monitor each student's reading and make in-the-moment decisions about how to best support a particular student.

Only 33 % of workshop routines included teacher-student conferences (see Fig. 1). Observation and interview data revealed that teachers did not regularly engage in conferencing to differentiate instruction. The implementation of conferences was relatively weak. It is evident that many teachers implemented parallel structures for differentiation by layering conferencing atop guided reading groups (Coburn 2004). A teacher noted that

conferencing with the kids like for Readers Workshop one-on-one is also important, but I also do guided reading. So that's not necessarily a piece of Readers Workshop for Teachers College, but it is something that we always have done.

Conferencing, as a pedagogical method, leaned on an alternate set of assumptions about the nature of teaching and learning in which brief, yet highly focused and differentiated, doses of instruction advance student learning. Teachers could only conduct conferences when students were fully engaged in independent reading. The shift towards using conferences for individualized instruction required teachers to relinquish classroom management duties and trust that students would concentrate on their reading. In fact, Robin was the sole focal teacher who conducted conferences during each of her observations. Teachers appeared to conduct conferences infrequently, and two teachers (Grace and Dorothy) were never observed carrying out conferences.

Intensity of policy messages about reading workshop

Teachers enacted some of the reading reform's building blocks more than others. Most teachers assimilated the building blocks of independent reading and mini-lessons into their reading instruction; they were responding positively to those components of Lincoln Unified's reform. However, fewer teachers implemented two other building blocks: conferences and instructional materials. This indicates that there was variable coupling between the district reading program and classroom practice. What accounts for these patterns of responses to the district reading reform? In the following section, I delineate how the intensity of policy messages played a role in affecting the classroom-level implementation of TCRWP.

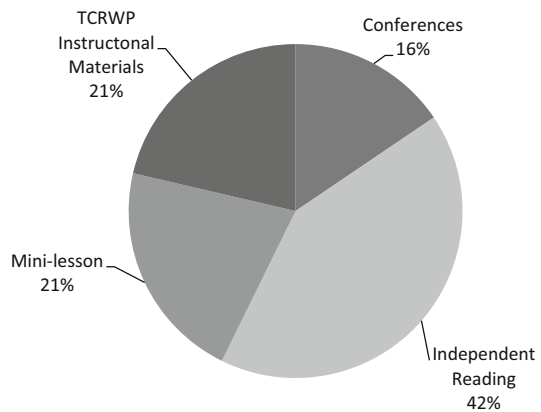
Teachers' instructional practices are shaped by the ideas that they engage with (Coburn 2001a; Spillane et al. 2002). Over the course of the school year, Lincoln Unified's teachers encountered 344 policy messages about the reading reform incorporating ideas about how reading should or must be taught (n.b., details on the identification and analysis of policy messages are provided in the "Data Analysis" section of this paper). These messages were carried by professional development facilitators, coaches, district and school administrators, and instructional materials.

For example, a reading coach reminded a first grade teacher to use the Growing Readers text for guidance on how to teach mini-lessons. In this case, the coach was a conduit of messages about expectations for teachers to use the TCRWP-aligned instructional materials.

However, as represented in Fig. 2, teachers did not receive equal doses of policy messages about each of the four building blocks. Certain building blocks received greater emphasis than others. Teachers engaged with approximately twice as many messages about independent reading as compared to messages about mini-lessons, instructional materials, or conferences. In particular, teachers' exposure to ideas about the building blocks of independent reading and conferences affected their responses to those particular elements of the reform. I explicate how the intensity of policy messages on various building blocks played a role in coupling the reading reform to teachers' workshop routines.

Over 40 % of policy messages on the building blocks addressed independent reading. The intensity of messaging about how and why teachers should adopt independent reading played a role in creating relatively tight coupling between this building block and classroom practice. Across the 2010–2011 school year, elementary teachers encountered messages about independent reading from numerous individuals in both formal and informal settings. Teachers were inundated with messages during the summer professional development about setting up procedures and expectations for independent reading to ensure that students spent time with eyes on print. Facilitators shared numerous tips on how teachers could institute independent reading in their classrooms, organize their classroom library, and motivate students to read. The facilitators also emphasized that, students should spend the majority of the independent reading time deeply immersed in their books, rather than talking, moving around the room, or even writing. Over the course of the school year, administrators and coaches frequently talked with teachers about the role of independent reading. Lauren, the coach at Taylor Elementary, succinctly described independent reading to a group of teachers as: “twenty minutes of

Fig. 2 Proportion of policy messages addressing building blocks of TCRWP



N= 344 messages

hardcore reading. We want them [students] to be lost in a book.” A third grade teacher also explained that

reading independently without any sort of instruction but just having that book...and just reading, reading, reading. I know that’s something that a couple of the coaches feel strongly about. Nick [the district’s Lead Coach], in particular, in the district is a real advocate for unrestricted independent reading time.

Thus, intense messaging about independent reading functioned to develop tighter couplings between the reform’s ideas about independent reading and teachers’ classroom practice.

About 20 % of policy messages on the building blocks related to mini-lessons. The quantity and quality of messaging around mini-lessons was a factor for the coupling between this building block and classroom practice. Teachers did have opportunities to engage with messages about mini-lessons in multiple venues. During the summer professional development, teachers viewed and analyzed videos of mini-lessons, and they heard messages that each mini-lesson should begin with: Today I will teach you that readers__. Furthermore, a committee of coaches developed a mini-lesson planning form with the message that mini-lessons should relate to a California English Language Arts standard. Yet teachers did not engage with many messages about how to use the TCRWP instructional materials to guide mini-lessons.

In comparison to the other three building blocks, teachers received far fewer messages about conferences. Only 16 % of messages addressed conferences. As compared to other dimensions of the district’s reading reform, ideas and rules about conferences were more loosely coupled to teachers. Teachers occasionally encountered messages telling them to conference with students as a way to provide differentiated instruction meeting students’ needs. During the summer training, teachers received limited amounts of training on how to conference with students; facilitators devoted less than 2 h (of a 5-day, 32 h professional development) to the topic of conferencing. Teachers at Davis Elementary engaged with messages about conferences when their coach facilitated a school wide professional development session on the new reading program and recommended that teachers create a binder with a set of forms documenting conferences with students. However, there were few concrete resources or materials from TCRWP or the district on conferencing. This meant that teachers needed to plan their own conference teaching points and design their own materials to structure conferencing. As a result, teachers’ routines had weaker couplings to the reform’s ideas about the nature and role of conferences as a method for differentiation.

Implementation pathways

While some teachers enacted mini-lessons based on the guidance contained in the program’s instructional materials and dedicated time to independent reading, many teachers’ enactment of the program looked quite different. To reveal pathways for implementation in which teachers took on combinations of building blocks, I conducted QCA. The analytic technique of QCA lets me ascertain the pathways

resulting in mini-lessons (Cress and Snow 2000). I selected the outcome of mini-lessons because, during workshop, the direct instruction of mini-lessons introduced, modeled, and inputted reading strategies and skills to students. The literature on effective instruction highlights the importance of direct instruction because it involves the teacher setting clear goals for student learning and sharing explanations of particular ideas or strategies (Hunter 1994; Rosenshine 1985; Taylor et al. 2000). In addition, the mini-lesson involves the teacher actively delivering instruction to all members of the class. Simply stated, the mini-lesson is the segment of workshop in which teachers carry out their central pedagogical moves.

Table 2 presents QCA results on the three most common pathways that resulted in a reading mini-lesson. Each pathway is composed of teachers' enactment of a specific combination of building blocks. The most common mini-lesson pathway was teachers structuring time for independent reading and conducting conferences. In eight cases, teachers' workshop routine consisted of a mini-lesson, independent reading, and conferences. These teachers' workshops included all three of TCRWP's key pedagogical strategies. However, the instructional content of those routines was not guided by TCRWP materials. Instead, the content of those workshops was influenced by other factors. For instance, many of Linden Elementary's teachers taught standards-based mini-lessons. These teachers melded the pedagogy of TCRWP with the content dictated by California's state standards.

Another common pathway towards mini-lessons was the program's instructional materials and independent reading. There were six workshops composed of a mini-lesson guided by the instructional materials followed by independent reading. However, in these cases, teachers did not engage in conferencing with students during the independent reading time. For example, Meredith facilitated a reading workshop block with a mini-lesson on reading books with expression and an independent reading period for students to quietly read their leveled books. This mini-lesson closely followed a lesson from the Units of Study teachers' guide developed by Calkins. Yet she did not engage in reading conferences with her third graders. Instead, she circulated, managing student behavior. The three teachers who adopted this particular combination of building blocks chose to integrate some of TCRWP's pedagogical methods and follow the content from the program's instructional materials. It appears that the ideas from the instructional materials supported teachers' adoption of TCRWP's methods. The instructional materials contained plans for mini-lessons with sample teacher-student dialogue as well as

Table 2 Outcome pathways calculated by QCA

Outcome Pathway	Outcome	Number of cases	Consistency score
Independent reading × Conference	Mini-lesson	8	0.75
Independent reading × Instructional materials	Mini-lesson	6	1.00
Independent reading × Conference × Instructional materials	Mini-lesson	4	1.00

guidance on how to facilitate independent reading. For example, Calkins' Units of Study provided suggestions on how to encourage students to engage in sustained, silent reading, thereby serving as a resource for teachers attempting to implement this strategy. It is necessary to consider the educative role of instructional materials and how they function within infrastructure.

QCA revealed that independent reading was a part of most combinations leading to mini-lessons. The QCA results indicate that independent reading was an instructional activity that teachers incorporated into their routine prior to taking on other features of the new reading program. Therefore, independent reading functioned as a foundational step for this district's reform. In contrast, it appears that teachers' usage of instructional materials was somewhat disassociated from mini-lessons. Teachers drew upon other forms of guidance on what content to cover in their mini-lessons. This finding points to the possibility that usage of the new instructional materials may be delayed to a later stage of TCRWP implementation. Finally, QCA findings show that conferences may be more likely to be adopted at a later stage of the reading reform.

Conclusions

This paper utilized coupling theory and the concept of routines to investigate elementary teachers' implementation of a reading reform. This paper illuminates the components of educational infrastructure playing a role in implementation. By presenting the ways in which the intensity of policy messages influences classroom practice, this study bolsters the existing research on the classroom-level enactment of instructional policy (Coburn 2004; Diamond 2007). Additionally, the study highlights teachers' differential responses to the various branches of an instructional policy, such as independent reading versus use of instructional materials. This is important because additional, theory-driven, qualitative studies of instructional reform are needed. These types of studies enable us to interrogate the black box of policy and practice. These types of studies would advance our understanding of the role of infrastructure.

First, I identified the key building blocks of TCRWP and determined the extent to which district policy messages addressed each building block. I found that teachers encountered many policy messages about the building block of independent reading, while receiving little direction regarding conferencing. My application of coupling theory highlights the linkages between the policy environment and instruction. This reminds us that teachers' practice can be influenced by specific ideas regarding appropriate and effective ways to teach reading. The paper's findings also illuminate the microprocesses of implementing TCRWP as a reading reform. This attention to TCRWP is needed because the Readers' Workshop model has gained popularity with reformers and educators across the U.S., yet there is little empirical work on it. Additionally, Calkins, as the author of several resources on Readers' Workshop, has become a prominent non-system actor in the field of literacy—particularly with regards to CCSS (Calkins et al. 2012; Porter-Magee 2015).⁵

⁵ <http://www.nytimes.com/roomfordebate/2014/07/02/the-right-approach-to-reading-instruction>.

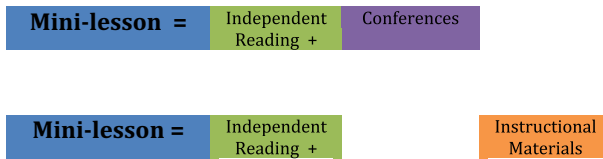


Fig. 3 Model of combinations of conditions for mini-lesson workshops

Second, I used the concept of routines to analyze 12 teachers' reading workshops. The analytic technique of QCA surfaced the combinations of causal conditions associated with teachers enacting mini-lessons, a central pedagogical element of TCRWP. As depicted in Fig. 3, I found that independent reading and conferences were frequently part of teachers' mini-lesson workshops. Yet some teachers taught mini-lessons which were not guided by the new curricular materials. The outcome pathways depict the steps towards complete implementation of the district's reading reform.

QCA, as an analytic technique, answered important questions about the combination of factors in teachers' patterns of teaching TCRWP. The QCA findings reveal how the reform's building blocks are 'stacked,' or ordered. Specifically, the QCA findings offer contributions to the field of educational policy implementation because they point to the incremental manner in which teachers implement reform. The QCA findings enable a diagnosis of which elements of reform are more—or less—readily incorporated into classroom practice. Importantly, this technique rigorously analyzes qualitative data and can speak to broader audiences (Trujillo and Woulfin 2014). While aiming to reinforce educational infrastructure, reformers should develop differentiated support systems to move from tinkering to accommodation of the ideas and practices associated with a reform (Coburn 2004; Cohen 1990; Tyack and Cuban 1995). In the case of TCRWP, it appears that instructional leaders and teachers may need additional support around shifting teachers' approach to conferencing.

Limitations

This study of teachers' implementation of a reading reform has several limitations. First, my findings surface details on teachers' adoption of TCRWP's building blocks during the first year of the reform effort, but it would be interesting to trace patterns of implementation across several years. Scholars attending to the implementation of instructional policies should carry out longitudinal studies to capture if and how teachers' responses change over time. Second, the research design could be strengthened by tracking school-level conditions, including how principals and coaches emphasized particular policy messages. Attention to leadership practices during implementation could advance our understanding of the coupling of policy with instruction. Third, the study's sample size enabled a fine-grained analysis of the mechanisms of implementation, yet I cannot generalize these findings to a larger set of teachers.

Implications

The findings from this study have implications for research on instructional reform and for the design of policy. Researchers should attend to a policy's multitude of ideas. While conducting policy analyses, researchers should consider how ideas about the content and pedagogy instruction are represented and shared with educators. It is necessary for researchers to attend to how policies privilege some aspects of teaching and learning over others. For instance, which state and district policies emphasize phonics or assessment over vocabulary? We need to deepen our understanding of how the educational infrastructure, including standards, textbooks, assessments, and professional development, shapes teachers' routines. Researchers should also consider how this infrastructure is influenced by forces, including education policy, the sociopolitical context, and media/social media. For instance, how do recent debates on Common Core influence the opportunities for educators to engage in meaningful professional development on the new standards? Additionally, researchers should use QCA as an analytic technique to determine the outcome pathways leading towards teachers enacting instructional elements.

This study also has implications for policy. As policymakers attempt to alter the nature of teaching and learning in schools, they should consider the quality, as well as quantity, of policy messages bombarding teachers. For instance, policymakers should account for when and under what conditions teachers engage with specified messages about using particular instructional methods. And they should contend with the flaws in the current infrastructure. For example, many states are directing educators to use the new standards to set targets in the new teacher evaluation system. The simultaneous policy efforts present challenges—to learning and change—and do not represent a clearly executed infrastructure.

Finally, this study has implications for practitioners within districts and schools. First, district leaders should remain attuned to how they balance their messaging about different elements of a reform. It is important for district administrators to reflect upon which aspects of a new program they're emphasizing in professional development sessions and meetings for both school leaders and teachers. The QCA findings highlight that the majority of teachers do not adopt reforms in a whole cloth manner. For this reason, district administrators must prioritize specific aspects of a reform in order to foster teachers' adoption of key components of the reform. For instance, these administrators could elect to focus on mini-lessons and independent reading during the first year of implementation but could provide supplementary trainings on conferencing and using the instructional materials prior to the second year of implementation. This incremental approach to implementation would be more feasible for school-level actors and could result in higher levels of teacher buy-in for complex reforms.

Second, school leaders should be cognizant of the ways in which teachers enact some aspects of an instructional reform, while ignoring others. Instructional leaders should obtain multiple forms of information about teachers' responses to a new program. In the case of reading workshop, principals and coaches could conduct walk through observations to see how teachers at different grade levels are taking on

independent reading versus conferences. Then leaders could design and facilitate professional learning opportunities to support teachers' enactment of specific elements of the reform. The professional development would match the program and meet teachers' needs, thereby constructing an infrastructure for change. Third, teachers should be encouraged to lean on their colleagues' expertise with regard to particular components of a reform. For example, teachers could observe a colleague with an established practice of conferencing with students; this could develop their capacity for enacting this building block of the reform. Future research should use QCA to reveal the combinations of organizational factors enabling robust implementation of reading policy. This line of research would respond to questions about the current state of educational infrastructure as well as offer suggestions for improvement.

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