ABSTRACT

PORTER, RACHEL ELLIOTT. Understanding Common Core Implementation: How Educators Intuit, Interpret, and Begin to Integrate Curriculum Reform. (Under the direction of Dr. Bonnie C. Fusarelli.)

The purpose of this comparative case study was to explore the ways educators at the school-level experience a federally directed curriculum policy change and examine the contextual factors that impacted the way it was initially implemented. Application of an organizational learning (OL) lens was incorporated to help illuminate the ways educators made sense of and began to implement the new Common Core State Standards.

This study investigated the experiences and perspectives of teachers in two North Carolina elementary schools, as they initially implemented the new standards. Qualitative data was gathered through teacher surveys, faculty focus groups and interviews with each school principal and the two district Race to the Top coordinators.

Analysis of the collected data uncovered common themes between the experiences at each school, as well as varied contextual factors that impacted implementation. Themes included interpretation of the policy, the role of professional collaboration, professional and personal impacts, time and pacing, and alignment to other initiatives. Comparison to organizational learning frameworks revealed numerous links between teacher experiences and elements of OL theory that helped explain the dynamics at hand.

Findings from the study suggest several implications for policy and practice. Federal and state level decisions should consider ways to improve coordination and communication between and among the various levels and move to link federal efforts to the ground level in a more meaningful way. For district practitioners charged with enacting and supporting policy implementation, findings suggest a need for better communication and better designs
for the management of training and resources. At the school level, principals and coaches, in the role of both supporting implementation and filtering information, must promote straightforward discussion focused on a clear vision and unambiguous expectations. For classroom teachers implementing Common Core, or any other large scale reform, the findings of this research reveal the importance of embracing change while remaining anchored to the goals and purposes of education at its core.
Understanding Common Core Implementation: How Educators Intuit, Interpret, and Begin to Integrate Curriculum Reform

by
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A dissertation submitted to the Graduate Faculty of North Carolina State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy

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DEDICATION

I dedicate this dissertation to all of the determined educators who have stayed in public schools despite the growing pressures. As a teacher who left the classroom early in her career, but remains dedicated to improving the system, I have the utmost respect for the thousands of fantastic teachers and administrators who work beyond human capacity to make each day better for their students.
BIOGRAPHY

Rachel Elliott Porter was born in Virginia but schooled in North Carolina, attending eight different public schools from first to twelfth grade. By the end of high school, Rachel knew she wanted to teach and earned a NC Teaching Fellows scholarship to attend UNC Wilmington. After receiving a BA in Elementary Education, she moved back across the state to teach fourth grade in a small mountain community. Two years later, she returned to the middle of the state with her future husband and began teaching fifth grade for Durham Public Schools.

After four years of teaching elementary school, and a season spent working part-time as an environmental educator for the state parks system, Rachel was eager to explore other avenues in the field of education. Her work with the state parks system opened up the possibilities and challenges of working with adults, and ultimately led her to pursue work in school staff development. In 2004, she began working as an Instructional Specialist with the non-profit Centers for Quality Teaching and Learning (QTL), an organization dedicated to the belief that all students deserve high quality educators.

Though she long avowed having no interest in pursuing an advanced degree, the challenge of working with teachers and school administrators led Rachel back to school, pursuing a MEd in Curriculum and Instruction from NCSU in 2009. It was during this study that she was further convinced to begin work toward a doctoral degree in the area of education policy. Study in these two areas equipped her with the tools to become an accomplished staff developer and take on more responsibilities with QTL.
As she completes the requirements of her PhD, Rachel has achieved the position of Programs Director with QTL and has an eye on leading the organization, sustaining its ability to support and assist schools far into the future. Her long-term goal is to act as a change agent in education and to play an increasingly larger role in transforming public schools for the better.
ACKNOWLEDGEMENTS

I would like to acknowledge all of the family members, friends, friends of friends and especially my husband – all of whom have patiently endured me throughout the “grad school years.” There really was a light at the end of that long tunnel. Thank you.
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CHAPTER 1

Introduction

In the United States, governance of public schools is the responsibility of each individual state or territory. Given that education is not mentioned in the U.S. Constitution, it falls under the Tenth Amendment as a states’ right by default; "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people" (Tenth Amendment). Thus, for nearly two centuries, each state acted individually and independently to establish and maintain its own public schooling system. However, since its inception during the Carter administration, the federal cabinet-level Department of Education (DE) has served to “promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access” (U.S. Department of Education [DE], 2010). In the second half of the twentieth century, as federal funding for educational programs gradually increased, so did the role of the department. By 2008, DE programs served nearly 55 million Pre-K through 12th grade students (U.S. Department of Education [DE], 2010).

Over its 32 years in existence, federal DE policy has become an increasingly prominent factor in the daily operation of public schools. There is possibly no greater evidence to this fact than the Obama administration’s Race to the Top program and its central curriculum reform initiative, Common Core State Standards. Though not technically considered a “national curriculum,” the Common Core standards have to date been adopted by 45 states and represent a sweeping curriculum reform effort of unprecedented scale.
As with nearly all educational policy, implementation falls upon the educators at the school level. In the past, changes to curriculum policy in North Carolina have been funneled from state-level origin, through each school district’s administration, to building-level administrators, and then to teachers. The federally driven transition to Common Core standards adds a significant new level to this dynamic. The purpose of this study is to explore the ways educators at the school-level experience such a dramatic policy change. An organizational learning lens is utilized to examine the contextual factors that impact the way it is initially implemented.

**Background**

The Race to the Top grant initiative continues a chain of federal level education reforms stemming from the 1965 Elementary and Secondary Education Act (ESEA). Its most recent predecessor, the Bush administration’s 2001 No Child Left Behind (NCLB), ushered in an era of accountability that tied federal funds to student outcomes as measured by Annual Yearly Progress (AYP) on state tests. No Child Left Behind ties Title 1 funds (the largest source of federal funds allocated to schools) to academic standards. The law requires:

States and local districts to (1) have academic standards, (2) make annual progress towards having every student achieve the standards and closing gaps between all students and certain subgroups of students, (3) test students to see if they are learning, and (4) collect data on how they are doing. The law also requires states to identify schools and school districts that are not making enough progress and follow a step-
by-step process for either turning those schools around or closing them. (Lohman, 2010, p. 2)

The Obama administration’s 2009 Race to the Top (RttT) initiative addresses many of the same goals as No Child Left Behind, but in the form of a competitive grant process for American Recovery and Reinvestment Act (ARRA) funds. Whereas schools are required to adopt NCLB reforms in order to maintain base funding, they could now apply to receive the additional funding offered through RttT. In such, the two programs work in tandem, with NCLB as a mandate and RttT as an option. However, schools that chose to apply for RttT agree to the requirements of the grant – one of which is adoption of new Common Core State Standards (CCSS). At the time of this writing, 45 states have applied for the grant – and, in doing, have agreed to adopt the new standards. It is worth noting that, as of 2013, only 21 of the original 46 applicant states had been awarded RttT funds. North Carolina is a RttT recipient and, as such, agreed to fully implement the Common Core State Standards starting in the 2012-2013 school year.

Statement of the Problem

As a recipient of the Race to the Top grant, the North Carolina Department of Public Instruction (NCDPI) prepared a state level implementation plan as outlined in their RttT application. The state level plan includes comprehensive timelines, processes and responsibilities for implementation. Within this plan, however, each of its 115 school districts is expected to articulate its own Race to the Top plan with specific details matched to local contexts.
Common Core State Standards are the first curriculum reform of their kind to emanate from the national level, be filtered through state and district levels and ultimately enacted by individual educators at each school. The shifts required to implement these new standards represent a significant learning need for educators at all levels of the system, especially for classroom teachers. School reform efforts, in general, are complex and the reasons behind their success or failure are not often clear. Research in the area of school reform shows, as will be discussed in the following chapter, that even the most widely supported efforts have historically yielded mixed outcomes.

Many of the elements included in North Carolina’s state and local RttT plans, including standards reform, are not new concepts. Changes to assessments, curricula and standards had been part of the conversation in NC schools for many years. The most recent case in point being NC Department of Public Instruction’s Accountability and Curriculum Reform Effort (ACRE).

ACRE was launched in 2008 to redesign the K-12 curriculum around new Essential Standards based on the Revised Bloom’s Taxonomy. As state level designers became aware of the burgeoning national effort to establish new standards for literacy and math, ACRE put Essential Standards for those two areas on hold and narrowed their focus to the remaining academics and arts – social studies, sciences, humanities, technical subjects and so on.

As the Common Core State Standards initiative came into focus, ACRE adjusted accordingly and planned to roll out updated Essential Standards alongside the Common Core in 2012. As Dr. Jere Confrey, member of the National Validation Committee for the
Common Core Standards and contributor to the NCDPI Race to the Top plan, described, “the confluence of timing was such that they chose to go ahead with the other standards” and attempted to “create coherence by folding Common Core into the plan they already had” (J. Confrey, personal communication, December 17, 2012). This integration is officially referenced in the state Race to the Top plan: “NC will adopt the Common Core by July 31, 2010, and integrate them into our ongoing Accountability & Curriculum Reform Effort work, with its three-fold focus on improved standards, comprehensive assessment, and a next-generation state accountability model” (NC RttT Proposal, 2010, Section B1, p. 58).

Side by side, the NC Essential Standards and Common Core State Standards aim to achieve many of the same goals and their complementary nature would seem to make alignment a fairly straightforward process. However, the timelines for implementing both reforms were merged to require full implementation of all new standards within a single school-year. With this decision to roll out the K-12 Common Core State Standards for Math and English Language Arts, alongside brand new Essential Standards for all other K-12 subject levels, North Carolina embarked on a massive and unparalleled curriculum overhaul for the 2012-2013 school-year.

Much of the school reform literature points to the importance of context as a key factor for successful implementation. Implementation of curriculum and standards reform ultimately rests upon the contexts surrounding teacher learning and classroom use. What are the contextual factors that determine how teachers implement policy? How do they perceive these factors and their role in reform efforts? How can educational leaders and policy makers
better understand these factors, and consequently improve the likelihood of successful implementation?

**Purpose of the Study**

The purpose of this study was to explore the ways educators at the school-level experience a federally directed curriculum policy change and examine the contextual factors that impact the way it was initially implemented. The following research questions framed the study:

1. How do schools respond to large-scale policy change?
2. How do teachers experience the shift to adopt Common Core State Standards?
3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?

**Definition of Key Terms**

The following terms are used throughout the study.

- **4I Framework** – Developed by Crossan, Land and White (1999) as a structure for understanding organizational learning as a feed-forward/feedback process in which individuals, teams and the organization as a whole function to intuit, interpret, integrate and institutionalize change.

- **Common Core State Standards (CCSS)** – K-12 Math and English Language Arts (ELA) standards developed in 2010 by the National Governor’s Association (NGA) in partnership with the Council of Chief State School Officers (CCSS) and
adopted by 46 states as part of the Race to the Top (RttT) grant application process.

- **No Child Left Behind (NCLB)** – Bush administration reauthorization of the 1965 Elementary and Secondary Education Amendment. Mandates that schools must make changes and meet specific requirements in order to receive federal Title 1 funds.

- **Organizational Learning (OL)** – “the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organization in ways that support shared aims” (Collinson & Cook, 2007, p.8).

- **Race to the Top (RttT)** – Obama administration initiative, enacted in 2009, as part of the American Recovery and Reinvestment Act (ARRA). Offers federal funds to schools through a competitive grant requiring, among other things, that states adopt Common Core State Standards as part of the application process.

- **Systems Theory** – a way of interpreting how parts and whole interact and with and effect one another. Applied extensively to organizations as systems with “a whole consisting of two or more parts whose elements continually effect each other over time as they operate toward a common purpose” (Bierema, 2003, p. 28).
Significance of the Study

Education reform policy is a complex issue, particularly in terms of school-level implementation. The contextual factors that impact implementation at the school level are numerous and their relationship to the success or failure of such policies is only partially understood by practitioners and policy-makers. Given that school reform efforts align with many of the themes of organizational learning (OL) theory, OL models can be beneficial tools for creating better understanding the ways educators make sense of such policies. However, the application of OL theory to public school contexts is fairly recent and not yet widely accepted, as will be further illustrated in chapter 2, and thus merits additional study.

The adoption of Common Core State Standards is the first curriculum reform effort of its kind. For North Carolina schools, the mandate to implement all new standards for every subject and for every grade level at the same time presents an unprecedented organizational learning challenge. Every educator, at all levels of the system, is affected by this shift to new standards and required to make significant changes to the ways they approach teaching and learning.

Application of an organizational learning lens has the potential to shed new light on the complexities of this process. Understanding school reform policy implementation as organizational learning creates the potential to discover contextual and other factors within the process that are connected with success. A fuller understanding of these elements is needed so that school leaders can best support the implementation of new policies.
Overview of Approach

This comparative case study utilized a cross-case analysis of two North Carolina public elementary schools implementing Common Core State Standards. Data was collected during the first semester of the 2012-2013 school-year through surveys, focus groups, interviews, and document analysis. Interviews were conducted with the school principal and district Race to the Top coordinator for each of the two schools before the beginning of the school-year and again near the end of the first semester. Three online surveys (Appendix B), spread roughly six weeks apart, were given to all faculty members at both schools.

A focus group of five teachers was convened twice on each campus, once in early October and again in December. Semi-structured protocols were used for interviews [Appendices C, D] and focus group meetings [Appendix E]. Interviews and focus group meetings were recorded digitally and transcribed verbatim by the researcher. Related state, district and school documents were also collected throughout the period of the study. All collected data was compiled into a study database, and analyzed using constant and descriptive comparison to identify and confirm emergent themes.

The theoretical frame for this study is the treatment of school reform as an organizational learning process. As such, data analysis incorporated organizational learning and systems theory to determine how emergent themes align or do not align to key components of these models. All single and cross-case themes were compared to OL frameworks in order to both determine the usefulness of the models and draw conclusions
Chapter 1 has provided an introduction to and overview of the study. The following chapter examines the existing literature on school reform policy, organizational learning theory and its application to schools. Chapter 3 discusses the methodology employed and gives an overview of the comparative case study approach utilized in the study. Chapter 4
details the data analysis and findings of the research. Chapter 5 discusses these findings, conclusions and implications for policy and further study. The Appendix includes a summary of literature and the survey, interview and focus group protocols that were used in data collection.
CHAPTER 2

Literature Review

Introduction

The purpose of this study was to explore the ways educators at the school level experience a federally directed curriculum policy change and examine the contextual factors that impact the way it is initially implemented. Application of an organizational learning lens was intended to illuminate the complex dynamics that school leaders and policy makers must consider as they work to improve schools. This review of literature explores the related theory and research in the areas of school reform policy and organizational learning. Organization of the review is visualized in figure 2.1.

Figure 2.1. Literature review frame
The first section reviews the literature on school reform policy in terms of federal policy implementation and the roles of educators at the school level. This section explores research on the implementation of recent school reform efforts such as No Child Left Behind and Comprehensive School Reform. It also includes research on curriculum reform which, until the advent of Common Core, has been primarily at the state level. Connections to literature on systems change as related to school reform, and an exploration of roles in school change processes are included to help delineate the complexities of such policies and their implementation.

The following section examines the literature on organizational learning as related to school change. It includes discussion of organizational learning models, including Crossan’s 4I framework, Argyris and Schön’s double-loop learning, ecological models, and a survey of existing research that applies similar frames to school change. Each section is organized to include a description of the central concept, a brief review of relevant applications and a synthesis of significant research and empirical studies.

**School Reform Policy**

For nearly as long as there have been schools, there have been movements to change or reform them. This long tradition emerged in the U.S. in the late 1800s with The Committee of Ten’s calls for uniformity in public education, and the movement of states towards compulsory education laws. In the twentieth century, public schooling in the United States underwent numerous waves of reform - from the progressive ideologies of the early 1900s to the peak of the Civil Rights movement in the 1960s, to the outgrowths of the
controversial 1983 report, *A Nation at Risk*. Presented as an “Open Letter to the American People,” *A Nation at Risk* was the culmination of research conducted by The National Commission on Excellence in Education at the direction of then Secretary of Education T. H. Bell. Secretary Bell created the commission out of concern about "the widespread public perception that something is seriously remiss in our educational system" (National Commission on Excellence in Education, 1983, p. 1). In the report, the commission laid out a compelling argument for dramatically reforming all levels of the public education system.

**The federal role in school reform.** Prior to the 1960s, the federal government’s role in public education was a small one, leaving improvement efforts primarily to the state and local levels. This shifted dramatically with the passing of the Elementary and Secondary Education Act (ESEA) in 1965, which established the Title 1 program, providing federal funds to disadvantaged student populations (Vinovskis, 2007). The conventional wisdom about school reform also shifted dramatically in the decades immediately following ESEA. In their 1985 review of the effective schools literature, Purkey and Smith argued that, while reports such as A Nation at Risk focused on what was wrong with schools, they also, “focused public attention on schools and the need for change at precisely the time when over a decade of research suggests means by which this change might be accomplished” (p. 352). Indeed, the burgeoning “effective schools” research highlighted determining factors such as teacher effectiveness and school culture, and led to significant changes to education reform policy at the local, state and federal level.
In the last two decades of the twentieth century, as reform efforts became the predominant feature in the public education landscape, local, state and federal efforts became more tightly coupled, with the federal government playing an increasingly larger role. “The federal and state governments have become increasingly involved in education through mandates and the implementation of top-down command and control structures, such as higher standards, mandatory testing, and accountability all tied to a system of sanctions and rewards.” (Fusarelli & Fusarelli, 2003, p. 169). However, as Fusarelli and Fusarelli go on to point out, centralization does not equal coherence, and “even as the American system grows more centralized, it remains fragmented by the very nature of a federal structure” (p. 174).

At the federal level, updates to ESEA in the 1980s included the expansion of Title 1 to school-wide programs, and in the late 1990s generated the Comprehensive School Reform Demonstration Program (CSR or CSRD). CSR, launched in 1998, provided annual grants to high-poverty schools in order to help them, “develop and implement systematic approaches to school-wide improvement that are grounded in scientifically based research and effective practices” with the goal of enabling students to, “meet challenging state academic content and achievement standards” (U.S. Department of Education, 2004).

As with prior Title 1 programs, the results of the CSR program were found to be mixed. As Finn (2002) summarized, “none of these reform strategies has so thoroughly proven itself as to be fit for national adoption. Evidence of success is spotty and ambiguous, partly because the versions tried so far have been limited in size or scope and because the simultaneous use of more than one method has muddied the water and confounded the data”
Datnow’s (2005) longitudinal study of 13 schools implementing six different CSR models found that shifting conditions and contexts within the struggling schools made sustainability of improvements a major challenge. Data showed that, within four years of initial implementation, nearly half (six) of the 13 schools had dropped their CSR model and only two were shown to still be implementing their selected model at a high level (p. 134).

In an examination of why some of the CSR reform efforts succeeded while others failed, Finnan (2000) attributed mixed results to mismatches between reform models and school cultures:

Each of the reform models supported by CSRD had what can be called a culture of its own. The model is built on a set of assumptions; it supports certain values and actions. The model provides a way of seeing schools and schooling. Thus the implementation process becomes an interaction between three cultures – school culture, classroom culture and the culture of the reform model. (p. 4)

Finnan’s (2000) study of 50 South Carolina schools implementing the Accelerated Schools Project CSR model revealed that results were indeed varied and connected this to cultural alignment or lack thereof. Schools that saw success had a clear compatibility between their context and the changes presented within the model. Failure, however, was common in schools where, “such compatibility does not exist, and the reform is not implemented as designed, if it is implemented at all” (p. 20). This lack of cohesion proved to be the rule rather than the exception among schools implementing CSR in the late 1990s, leaving many to judge as Johnston (2002) does that, “almost without exception, and contrary
Reform in the 21st century. In 2001, ESEA was reauthorized by the Bush administration as No Child Left Behind (NCLB). In sharp contrast to the expected reduction of federal involvement in public schools, NCLB in many ways expanded the influence of the U.S. Department of Education; “rather than trying to abandon a federal role in education altogether, Bush wanted to close the achievement gap by mandating accountability and high standards, annual academic assessments, and consequences for schools that fail to educate disadvantaged students” (Vinovskis, 2007, p. 163). Named for its overall goal of academic proficiency for all students, NCLB emphasized teacher quality, research-based reading instruction and academic improvement as measured by Annual Yearly Progress (AYP) on state tests.

Although NCLB created a nation-wide accountability structure, it left decisions about standards and metrics up to each individual state. Thus, implementation from state to state has been highly variable and comparisons of improvement remain difficult to quantify. “Under NCLB, each state is permitted to set its own standards and determine levels of proficiency (in effect to set the bar), which makes nationwide comparisons difficult, given the considerable variability in state standards” (Fusarelli & Fusarelli, 2003, p. 173).

Though the results of these programs have been mixed and research on their effectiveness inconclusive, much of current federal education policy still draws from the foundations of the ESEA. As of 2013, NCLB remains the current legislated version of ESEA.
Amidst calls to “fix” NCLB, the Obama administration has proposed several changes that have yet to be enacted by congress. In an attempt to affect change outside of ESEA, adjacent to NCLB, the Obama administration has enacted their central education initiative, a grant program dubbed Race to the Top (RttT). As an offshoot of the American Recovery and Reinvestment Act of 2009, Race to the Top has many of the same goals as NCLB, but provides funding to states through discretionary competitive grants rather than attached to mandates.

One of the other key differences between NCLB and RttT is the promotion of national standards. Whereas NCLB allows states to determine their own student performance standards and measurements, RttT, “requires a state that receives a grant to promise to adopt and use common K-12 standards for what students know and are able to do. These standards must be developed in a consortium with several other states and be internationally benchmarked” (Lohman, 2010).

Common Core State Standards, developed in 2010 under the direction of the National Governors Association and the Council of State School Officers, represent the first ever national-level curriculum reform in the United States. Though the standards themselves do not represent a federal curriculum, they are attached to measures and assessments that represent sweeping changes to the curricula in the 45 states, plus DC and the U.S. Virgin Islands, that have so far adopted them. Thus, RttT and Common Core State Standards represent an unprecedented step in nation-wide curriculum reform. As Bohmer (2011) puts it: “This is not just the latest round of revisions to your state’s standards. We are living through
a historic, national event” (p. 39) where the federal government is, for the first time, “imposing a logic of development that shape(s) the whole of the curriculum from kindergarten through high school” (p. 38).

Curriculum reform policy. Though unparalleled as federal-level policy, curriculum reform itself can be traced to beginnings in the early twentieth century. As early as 1902, education reformers such as John Dewey were examining the role of curriculum in learning and questioning the ways the public school system, “fixes its attention upon the importance of the subject-matter of the curriculum as compared with the contents of the child's own experience” (p. 3). However, it was not until much later in the century that efforts to reform public school curriculum crystallized into coordinated outcomes.

In the current education policy environment, it is easy to see the relationship between assessments, standards, and curriculum and how the former two influence the latter. However, this has not always been the case. The first efforts at national assessment came about in the late 1960s with the National Assessment of Educational Progress (NAEP), but opposition from states and teacher unions kept results from being reported publicly. It was not until the early 1980s that policymakers began to see the reports from NAEP, and other assessments including the ACT and SAT, as valuable for measuring the effectiveness of the public school system as a whole.

In response to previously mentioned reports such as A Nation at Risk, the 1980s saw the first wave of state and national level curriculum efforts. Led by the National Governors’ Association (NGA), proponents held that, “the core of standards-based reform is the idea that
education policy should be made “coherent” and organized around clear statements of what students should be able to know and do, coupled with assessments that would determine whether or not students were attaining the standards” (McDermott & DeBray-Pelot, 2009, p. 195). In 1989, subject matter standards first gained attention at the national level when the National Council of Teachers of Mathematics released its first set of curriculum and assessment standards (Vinovskis, 2007, p. 51). The National Council of Teachers of English followed in 1994 with their first standards for assessment of reading and writing.

Both sets of standards sought to provide cohesive guidance to educators, but as they were not widely adopted or enacted by states, teachers across the nation were left to make sense of them against incongruous state and local-level directives. Developments at the federal level, such as Bill Clinton’s “Goals 2000” and the reauthorization of ESEA as the Improving America’s Schools Act (IASA), pushed many states to finally establish their own standards. “By 2001, nearly all states had defined academic performance standards for students and were testing students to determine their mastery of those standards” (McDermott & DeBray-Pelot, 2009, p. 197). However, from state to state, standards and metrics varied greatly. Thus, the span of curriculum reform prior to Race to the Top stopped far short of implementing comprehensive national standards.

School reform policy implementation. “Policies, no matter how well designed, must be implemented successfully to achieve their intended effects” (Cooper, Fusarelli, & Randall, 2004, p. 83-84). Despite this key linkage, the actual process of implementation has often been downplayed in policy research. Since implementation is where the proverbial rubber
hits the road, it deserves further scrutiny. “Amidst all the talk of education reform and change, we need to examine more closely the issues and intricacies of policy implementation in education. After all, educational reform and change are impossible if policies are not implemented properly” (Cooper, Fusarelli, & Randall, 2004, p. 84).

As with much education policy, regardless of the level it is initiated, school reforms are enacted by teachers and administrators at the school level. It is at this level that reform policy inevitably succeeds or fails to achieve its goals. Scholars such as Smith and O’Day (1990) agree that, “schools are the basic unit of change, and school educators (teachers and principals) are not only the agents, but also the initiators, designers, and directors of change efforts” (p. 235).

Studies of recent reform efforts, such as CSR, have consistently shown that school-level dynamics play a major role in their success or failure. In the previously discussed study of the Accelerated Schools Project, Finnan (2000) notes that, “support for school-wide change builds on the values of trust, equity, risk taking, participation, reflection, professionalism, experimentation, school as the center of expertise, and communication and collaboration” (p. 13).

In addition to school-level context, district-level dynamics also play an important role in reform policy implementation. In the age of NCLB, school districts have been placed at the center of accountability models and bear the responsibility for supporting and improving schools. Though the research on the role of districts in school reform is mixed, many agree that “districts matter fundamentally to what goes on in schools and classrooms and that
without effective district engagement, school-by-school reform efforts are bound to disappoint” (McLaughlin & Talbert, 2003, p. 5).

Within the district context, the ways in which district leaders interpret policy is a large determinant of program success. Spillane (2000) describes this critical role using a cognitive perspective, pointing out that, a “key dimension of the implementation process concerns whether, and in what ways, implementers change their minds in response to policy” (p. 145) and that, “district leaders’ schemes for understanding instruction and its improvement enable them to place new knowledge into some framework for interpretation, a critical component of sense-making” (p. 166-167).

The role of cognition in policy - at the district level of policy interpretation and the school level of teacher implementation - should not be underestimated. “All too frequently, policymakers assume that the goals and objectives of a policy are known to everyone, that everyone involved in implementing policy understands their roles and responsibilities, and that implementation is simply a matter of carrying out administrative mandates” (Cooper, Fusarelli, & Randall, 2004, p. 88). This view ignores the complexities of interpretation, motivation and behavior at all levels of the educational system, dynamics which may be better understood using a systems lens.

**School reform as systems change.** When exploring issues of school reform policy and its implementation at the district and school level, it is helpful to understand the reforms as systems change. Stemming from multi-disciplinary study of organizational and societal
transformations, the development of systems theory in the twentieth century has provided many helpful tools for understanding the dynamics of change processes.

**Systems theory.** In “Systems thinking: A new lens for old problems,” Bierema (2003) defines a system as “a whole consisting of two or more parts whose elements continually effect each other over time as they operate toward a common purpose” (p. 28) and presents the concept in sharp contrast to previous, mechanistic, reductionist thinking. Since the 1990’s, change leaders such as Peter Senge have championed systems thinking as THE way to conceptualize and solve issues related to change at the individual, organizational and societal level. Systems theory addresses whole and parts together as both interrelated and interdependent. Senge (1990) integrates systems theory as a cornerstone for his five identified disciplines of a learning organization, asserting that “systems thinking is a conceptual framework, a body of knowledge and tools that has been developed over the past fifty years, to make the full patterns clearer, and to help us see how to change them effectively” (p. 7).

**Models of systems change.** Theories of systems change vary widely in terms of perspective and components emphasized. Much of the literature prior to the 1990s delineated content and processes as separate elements, which is contrary to the central themes of systems theory itself. “Content” research primarily focused on antecedents and consequences, using large samples and statistical methods, while “Process” literature focused on roles of managers, using in-depth case studies. In an attempt to provide a more comprehensive model of strategic change, Rajagopalan and Spreitzer (1997) sought to
challenge prior assumptions and present a synthesis through a multi-lens approach. In their analysis of strategic change, they apply 3 lenses:

*Rational Lens* – sequential, planned search for optimal solutions to well-defined problems based on previously defined firm objectives

*Learning Lens* – strategic change is seen as an iterative process that managers implement in small steps

*Cognitive Lens* – emphasizes the interpretive processes through which managers enact the environmental/organizational context

The authors propose that the limitations presented by each lens can be mitigated by integrating the three for a comprehensive perspective of strategic change. The assumptions and linkages underlying each perspective are reconcilable and more thoroughly understood together than when each lens is applied separately. Specifically, the learning and cognitive lenses add value to the rational lens by explaining why and how firms behave and respond to environmental shifts. When the perspectives are blended, Rajagopalan and Spreitzer (1997) recommend that each individual perspective be delineated to maintain conceptual clarity in examining cause-effect and content-process relationships.

Understanding of systems is often connected to scientific phenomena – body systems, solar systems, and ecosystems being among the most heavily used metaphors. In “An Ecological Process Model of Systems Change” (2011), Peirson and Ferguson propose a framework for change that integrates ecological principles and highlights a process-focused orientation. They define systems change in terms of current theory and then employ the key
principles of an ecological perspective to generate an Ecological Process Model of Systems Change. The authors present a case study of a policy driven systems level change through the lens of this model.

The starting point for such a design is defining the key concepts. “System” is defined as two or more entities joined to form an organized structure, operating according to rules, for some purpose. System components include concepts, objects, agents and institutions, theory, function, resources, and client groups. Hierarchies of authority and function create order and predictability and the system achieves broader functions and objectives than any one element could on its own.

“Change” is identified as action or movement from one state of being to another, and “systems change” is defined as the process of transformation in the existing structure, function and/or culture of the system. This level of change can be further characterized as either first-order (natural, small adaptations) or second-order (targeting the status quo to transform or reframe core elements of the system) (Peirson & Ferguson, 2011).

The ecological analogy is a core foundational element in the field of community psychology that allows phenomena to be analyzed in terms of the individual, the social and the system elements all at once. Attributed to the work of Kelly (1968), the four key principles of the ecological perspective are:

- Interdependence – reciprocal connections among elements in the system
- Cycling of Resources – tracking of resources as they are created, distributed, used, exchanged, managed, conserved and transformed
• Adaptation – ongoing transformations that occur within a system

• Succession – longitudinal lens of the progression of change

Peirson and Ferguson’s Ecological Process Model of systems change was developed from their research on policy-driven systems change, sensitized through the concepts of Kelly’s four principles, to create a multidisciplinary framework. The complex components of the model are presented graphically:

![Ecological process model of systems change](image)

*Figure 2.2. Ecological process model of systems change*

The authors put their model into action using a case study of a policy-driven systems change in the publicly-funded social program, Making Services Work for People (MSWFP), in Ontario, Canada. They make the case that an ecological model serves as a useful tool for understanding the complex dynamics of systemic change. This rings true for schools as well, and is borne out in applications of similar models to school reform by researchers such as Fusarelli (2011). Drawing on Bronfenbrenner’s (1979) ecological systems theory in his
analysis of the contextual factors that impact school reform, Fusarelli (2011) concludes that by “adopting a more holistic view of educational reform, we may indeed be able to ‘get more bang for the buck’ and systemically improve the life chances of all children” (p. 232).

Application of change models to schools. The rapid pace and growth of educational reform efforts in the last half century has resulted in change becoming the constant for schools. In Fullan and Steigelbauer’s (1991) The New Meaning of Educational Change, they argue that, “if reforms are to be successful, individuals and groups must find meaning concerning what should change as well as how to go about it” (p. xi). The “how” of school change has been explored extensively by educational researchers over the past two decades and there has been a growing realization that, though schools are now well-practiced at experiencing change, they have by no means become skilled in the process. Central areas of concern are the depth and sustainability of change efforts, and a lack of systems thinking in the development and implementation of reform policy continues to plague even the most promising efforts.

In his examination of what was absent from the CSR program, Johnston (2002) points to a deficiency of systems thinking at the ground level; “seldom did we find evidence that teachers routinely engaged in collective, school-wide deliberation on the range of school organizational components and instructional programs, the nature of relationships between these components and programs, or how to develop strategic interventions” (p. 222). This presents a considerable challenge for any change effort. As Thompson (2010) put it, “Changing for the sake of change is not warranted. Simple cosmetic changes in procedures
and practices are ineffective. The world has changed, but the system of public education has not” (p. 271).

Fullan (1991), argues that, “neglect of the phenomenology of change – that is, how people actually experience change as distinct from how it might have been intended – is at the heart of the spectacular lack of success of most social reforms” (p. 4). In discussion of school change processes and reform implementation, he offers four key insights related to success:

1. active initiation and participation,
2. pressure and support,
3. changes in behavior and beliefs, and
4. the overriding problem of ownership. (p. 91)

Each of these insights points to the roles of school leaders and teachers in understanding, implementing and supporting change efforts.

**Role of leadership in reform.** Leadership is key in any change effort and school reform must be driven by strong school administrators who are skilled in promoting and guiding transformation. School principals have the authority to drive change at the school level and may be the only individuals at that level with the necessary perspective to make it work; “school principals are generally knowledgeable about systemic design relationships. If one treats the school as the unit of analysis, then the principal may be able to create management structures and direct organizational members’ behavior in ways that ensure
functional integration of reform design and improvement model components” (Johnston, 2002, p. 222).

As middle managers (Fullan, 1991, p. 152), school administrators must interpret directives coming from above, shape the direction for their faculty and also “walk the walk” to move implementation forward. Fullan (1991) asserts that, “the principal’s actions (not what he or she says) carry the message as to whether a change is to be taken seriously” (p. 153). Borrowing from the organizational learning literature, as will be further discussed later in this review, Berson, Nemanich, Waldman, Galvin and Keller (2006) define effective school leadership as “a process of influencing and teaching others to understand why and how certain activities and goals need to be accomplished. As such, it constitutes a process of facilitating individual and collective efforts to learn and accomplish shared goals in organizations” (p. 579). Elaborating on this theme of principals as active facilitators, within a systems framework, Senge (2000) describes four key competencies for school leaders:

1. Engagement – recognizing complex issues and mobilizing learning within the system
2. Systems thinking – recognizing hidden dynamics and leverage points
3. Leading learning – modeling a learning-centered approach
4. Self-awareness – knowing their impact on the system and how it changes

(p. 414-419)

In a 1999 study of state education policy implementation in ten Pennsylvania elementary schools, Price-Moriarty found that principal leadership was essential to program
effectiveness. Qualitative data was collected from multiple case studies of Instructional Support Team (IST) programs in order to answer the question: What role, if any, do principals play in the implementation of ISTs? The researcher also sought to determine if and how principal behaviors impacted the effectiveness and outcomes of the program (p. 346). Findings suggested that the principal’s role was significant and in alignment with the characteristics outlined above:

When staff members were asked who has influenced the IST program at these schools, the school principal is one of the people they acknowledge. A teacher at one school says the principal “is always supportive… he always has to give the final okay as far as what’s going on in our school, and he is always pro-anything that will benefit the kids. (p. 350)

The principals in the study viewed as being most critical to program success were also found to lead by ensuring participation in staff development, providing time for teachers to collaborate and being actively involved in all aspects of program implementation (p. 351).

Principals, as the primary school-level leaders and managers, have a significant impact on the success or failure of change efforts. However, as Senge (2000) points out, successful change “requires multiple layers of leadership roles. Formal and informal leaders, at the classroom, school and community levels, each provide different resources to the change initiative” (p. 275). Thus, creating and supporting these layers, through engagement and on-going professional learning, is crucial. In such a vision of shared leadership, it is essential that, “teachers should acquire the knowledge and perspectives to be full participants
is shaping systemic school reform agendas, and that school principals should occupy the pivotal position of facilitating such professional development” (Johnston, 2002, p. 226).

**Role of teachers in reform.** In the same way that federally driven programs must be coherently implemented at the school level, school change depends heavily on what goes on at the classroom level. Thus, teachers are the ultimate enactors of any change effort, regardless of where it emanates. Irrespective of the ways policymakers and school leaders handle reform, when class is in session, the success or failure of the change comes down to the teacher’s actions and behaviors. However, as Fullan (1991) points out, reforms in the classroom are not just technical and dependent solely on the individual teacher, but are also social and connected to the culture and climate of the school, district and system as a whole. Thus the role of teachers in reform must be understood within a broader context, even if “the language of reform underestimates the intricate ways in which individual and institutional lives are interwoven” (Little, 1993, p. 147).

In their qualitative study of teachers in a reforming California high school, Olsen and Sexton (2009) examined teachers’ perspectives on their role in the reform process. Over the course of their year-long study, the high school in question had adopted several reform efforts including small learning communities, new curriculum maps, a shift to block scheduling, the addition of an advisory period for students, and a high stakes accreditation process. Their list of concurrent reforms, though extensive, is not outside the norm for public high schools.
Data showed that teacher’s experiences were influenced by contextual elements such as tensions between and among various levels; “we think that these already-existent tensions flared up largely because of the frustration, loss of professional autonomy, and other threat rigidity effects that the administrative climate and school reform culture engendered” (Olsen & Sexton, 2009, p. 20). A generally negative view of reforms emanated from the fact that teachers did not feel that they were working in concert with a facilitative administration.

They outline three criticisms of administration that illustrate this view:

One is that the chosen and implemented school reforms were not good ones; the later-career teachers were more likely than newer teachers to level this complaint. The second concerned the manner in which those reforms were decided and implemented—that is, how the administration mandated restrictive changes while preaching democratic reform, teacher buy-in, and consensus building. Most teachers in our sample shared this perspective. And the third complaint was that the school administration generally had “clamped down” on teachers and students in such draconian ways as to lower morale and anger teachers; all six teachers voiced this position. (p. 21)

Unfortunately, negative teacher perceptions of school change abound in the reform implementation literature, though bright spots can be found. If Fullan’s (1991) premise that “educational change depends on what teachers do and think – it’s as simple and as complex as that” (p. 117) is to be believed, researchers and policy makers must focus on the bright spots. Much of the recent literature on successful and innovative schools points to
engagement of teachers in their schools as Learning Organizations or Professional Learning Communities where they are part of a collaborative learning culture. These concepts will be explored in depth within the next section of the review.

At a basic level, successful reforms rely heavily on teachers’ decisions to accept or reject the change. Fullan (1991) suggests six issues that teachers should and do consider in this decision:

1. Does the change address an important need?
2. Is the change endorsed by administration and why?
3. Are fellow teachers likely to adopt the change?
4. Will I (how will I) contribute and collaborate to the change effort?
5. What is my role as change advocate/teacher-leader?
6. How can I negotiate the conditions of the change?

(p. 137-141)

Recognizing that teachers consider these issues – and validating the ways they address them – can provide policy-makers and practitioners with valuable guidance in designing successful change efforts.

Section summary. Literature in the area of school reform policy highlights the complexity of implementing federal policy at the school level. Systems change theory provides a useful paradigm for understanding the dynamics that play upon the success or failure of school reform efforts. Research indicates that previous federally driven reform programs have not proven to be effective and that the roles of teachers and school leaders are
critical to successful implementation. The following section outlines the literature on organizational learning and its application to schools as they enact school reform.

**Organizational Learning**

School reform policies such as the transition to Common Core State Standards represent significant organizational learning challenges for educators. Implementation requires changes in practice among individuals, teams, and faculties as a whole. Organizational learning (OL) frameworks can provide helpful tools for understanding the complex processes and dynamics of implementing reform policy. This section reviews literature surrounding the development of organizational theory, applications of specific organizational learning models, and studies that have applied organizational learning to school change.

**Defining organizational learning.** Conceptually, organizational learning has been discussed and defined in numerous ways. Taking into consideration the many questions and conditions that have been assigned to OL, Collinson and Cook (2007) define the term, “as the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organization in ways that support shared aims” (p. 8). Drawing upon the foundations of organizational development (OD), organizational learning theory emerged in the latter half of the twentieth century as a way to conceptualize change processes in business and industry. Argyris (1999) argues that, “organizational learning is a competence that all organizations should develop” (p. xiii).
Organizations are more than collections of individuals, encompassing structures, routines, systems and cultures, all of which impact the nature of organizational learning. Levitt and March (1988) described three observations of organizational learning: (a) behavior is based on routines, and actions are based on legitimacy over logic, (b) routines are built on history rather than anticipation of future events, and (c) actions are oriented to organizational goals and aspirations for successful outcomes (p. 320). Organizational learning processes are often aimed at achieving organizational goals by changing entrenched routines. Routines and structures embedded in organizational culture are central to much of the literature on organizational learning and are often deeply connected to how learning outcomes are measured and classified. The following section describes several models of organizational learning that emphasize key components of learning processes, context and culture.

**Organizational Learning Models.**

*Single and double loop learning.* Argyris and Schön (1978) first introduced the concept of characterizing organizational learning into two distinct types – single and double loop – distinguished by the interaction between values and behaviors. Borrowing the terms from electrical engineering, where thermostats are said to be single-loop learners that react to temperature but never ask why they are set to a certain temperature, they define single loop learning as occurring when organizations act in response to problems or events but fail to examine underlying assumptions or conditions (Argyris, 1999, p. 68). Double loop learning is considered to be at a much deeper level and tied to greater organizational success. Argyris (1999) explains that, “although single-loop actions are the most numerous, they are not
necessarily the most powerful. Double loop actions – the master programs – control the long-range effectiveness, and hence, the ultimate destiny of the system” (p. 69). The two types of learning are illustrated in Figure 2.3.

*Figure 2.3. Single-loop and double-loop learning*

Fiol and Lyles (1985) expand upon the concepts of single and double loops by characterizing learning as either higher or lower level based on how routines and culture are impacted:

- **Lower-level Learning:** Focused learning that may be mere repetition of past behaviors-usually short term, surface, temporary, but with associations being formed. Captures only a certain element- adjustments in part of what the organization does. Single-loop. Routine level.

- **Higher-level Learning:** The development of complex rules and associations regarding new actions. Development of an understanding of causation. Learning that affects the entire organization. Double-loop learning. Central norms, frames of reference, and assumptions changed (p. 810)
Higher-level or double-loop learning calls for questioning and deep reflection on current and past practices. This study will include examination of whether and how educators engage in single and double loop learning as they implement Common Core State Standards.

Systems thinking and organizational learning. The emphasis within organizational learning on levels, contexts and dynamics lends itself naturally to a systems perspective. In his study of the dynamics of inter-level organizational learning, Coghlan (2000) asserts that “organizational learning and change comprise individual, team, and interdepartmental group learning, and levels of aggregation work as a recursive system” (p. 67).

In this model, each level interacts with one another and what happens at each of the four levels impacts the other three. These dynamics are echoed in the work of other systems thinkers, such as Senge (2000), who characterizes organizational learning as, “exploring new ideas and different ways of thinking and interacting, connecting to multiple processes and relationships outside of ourselves,” asserting that this means “redesigning not just the formal
structures of the organization, but the hard-to-see patterns of relationships among people and other aspects of the system” (p. 20). Given that the policies related to Common Core State Standards are being filtered through multiple levels of the education system before they are implemented at the school level, a systems lens is helpful in making sense of the complex dynamics involved.

*Organizations as interpretation systems.* Daft and Weick (2001) describe a comparative model of organizations as systems that engage in four modes of interpretation: enacting, discovering, undirected viewing, and conditioned viewing. The model works on four assumptions: 1. that organizations are complex social systems that respond to information processed from the environment, 2. that this interpretation happens at both the individual and organizational level, 3. that managers play a critical role in formulating interpretation and 4. that organizations are made up of subsystems, each with different environmental conditions (p. 285). All four of these assumptions resonate in the educational realm where schools are highly social environments in which policy is interpreted at many levels, school leaders play an important role and every classroom within every school represents a separate environment with unique conditions.

Within the Daft and Weick (2001) model, context is central. “Organizations develop specific ways to know the environment. Interpretation processes are not random. Systematic variations occur based on organization and environmental characteristics, and the interpretation process may in turn influence organizational outcomes such as strategy, structure, and decision making” (p. 286). Successful organizations find ways to make
meaning for the system and the individuals within it. “To survive, organizations must have mechanisms to interpret ambiguous events and to provide meaning and direction for participants. Organizations are meaning systems, and this distinguishes them from lower level systems” (Daft & Weick, 2001, p. 293). Again, this characterization is appropriately matched to the school context and the needs for such mechanisms in education policy.

*Exploration and exploitation.* Interpretation of, and response to, environmental conditions is a learning process in which information is gathered, made sense of, and utilized. March (1991) divides this process into *exploration* and *exploitation*, which represent opposing forces requiring organizations to make choices about resources. The relationship is defined thus:

The essence of exploitation is the refinement and extension of existing competencies, technologies and paradigms. Its returns are positive, proximate, and predictable. The essence of exploration is experimentation with new alternatives. Its returns are uncertain, distant, and often negative. Thus, the distance in time and space between the locus of learning and the locus for the realization of returns is generally greater in the case of exploration than in the case of exploitation, as is the uncertainty. (March, 1991, p. 85)

For teachers implementing new policy, the balancing of exploration and exploitation becomes highly dependent on the interpretations of school leaders and the length of the policy cycle.
4I Framework. Developed by Crossan, Lane, and White (1999), the 4I framework is presented as a structure that furthers understanding of organizational learning processes by addressing learning strategies and the interactions between different levels as they experience change. They argue that organizational learning is more complex than single versus double loops. They also define the tension between exploration and exploitation as the struggle between developing new competencies and using existing knowledge. The authors organize their framework according to overlapping levels and processes:

<table>
<thead>
<tr>
<th>Level</th>
<th>Process</th>
<th>Inputs/Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Intuiting</td>
<td>Experiences Images Metaphors Language Cognitive Map</td>
</tr>
<tr>
<td>Group</td>
<td>Interpreting</td>
<td>Conversation/dialogue</td>
</tr>
<tr>
<td>Organization</td>
<td>Integrating</td>
<td>Shared understandings Mutual adjustment</td>
</tr>
<tr>
<td></td>
<td>Institutionalizing</td>
<td>Interactive systems Diagnostic systems Routines Rules and procedures</td>
</tr>
</tbody>
</table>

(Crossan, Lane, and White, 1999, p. 1090)

To briefly summarize the framework, 4I (1) recognizes the tension between assimilating new learning (exploration) and using what has already been learned (exploitation); (2) examines three levels of learning and relationships amongst the levels; (3) identifies processes that link the levels; (4) links processes to strategic renewal; and (5) recognizes that organizational learning involves the interaction between cognition and action.

In Crossan and Berdrow’s (2003) “Organizational Learning and Strategic Renewal”, they apply the 4I model within an empirical study of the Canadian Post Corporation (CPC) as
the organization made the shift from physical to electronic mail delivery. This shift represented a dramatic change for the organization and provided researchers with an interesting and instructive case study of strategic renewal. CPC managers described the shift as a four-phase process of self-definition, becoming self-sufficient, becoming competitive and preparing for the future. The four phases were a natural match to the 4I framework, the congruence of which was born out in data collected via archival analysis, observations and interviews. Data was collected and classified in bins according to the categories and levels within the 4I model and identified as converging or diverging within a matrix of 16 possible degrees of connection. The findings were organized according to each of the 4Is as well as a diagonal that tracked the dynamic flow of “feed-forward” (from individual to group to organization) and feedback (from organization to group to individual).

The authors concluded that the actions of CPC were better understood through the use of the 4I framework and that it had proved a useful tool in connecting organizational learning and strategic renewal. One strength the authors pointed to was that it allows researchers to categorize learning in a way that minimizes positive bias. However, the authors also point out the drawback of this neutrality in that it does not account for power issues. While the case is made for the 4I framework as a useful tool in connecting organizational learning and strategic renewal, practitioners would be wise to view its usefulness through the lens of organizational climate and culture for more effective application. For schools, the greatest promise of the 4I model may be the focus on assimilating exploration and exploitation, which is heavily at play for institutions overburdened with both entrenched traditions and need for
rapid and dramatic change.

**Organizational learning applied to schools.**

Before applying specific models of organizational learning to schools, one must address the question, “Are schools learning organizations?” While the idea of schools and faculties as learning communities is now commonly accepted, organizational learning theory has not been widely applied to schools. “Despite being the formal organizations universally established to promote learning, they [public schools] have been particularly slow to examine the potentials of organizational learning” (Collinson, 2007, p. 444).

Schools differ from the types of corporate and business organizations most studied in early OD and OL research in that they are built around non-financial outcomes. However, there has been growing realization that characterization of schools as being outside the bounds of other organizations is less than productive. As Fusarelli (2002) puts it, “the view of educational organizations as loosely coupled systems or organized anarchies is not especially useful to policymakers and educational leaders because it fails to offer any guidance for school improvement or educational reform” (p. 564). Rowan (1990) expands this view, arguing that, “whereas loose coupling theorists stressed a lack of rationality in teaching, current views argue that the work of teachers is complex and non-routine, but still subject to rational understanding” (p. 357).

In “Conditions Fostering Organizational Learning in Schools,” Leithwood, Leonard and Sharratt (1998) explore the application of organizational learning principles to change processes in public schools. Through examination of three school change studies, the authors
sought to determine which factors played most heavily on the varied responses, and subsequently had the most impact on organizational learning.

Drawing upon the existing literature on OL in non-educational organizations, they present a framework of five variables: stimulus for OL, outcomes of OL, external conditions, internal school conditions, and outcomes. These variables guided the inquiry as related to the interview and survey questions given to teachers and principals included in the study. Data analysis illustrated that stimuli for OL included individual dispositions (ex: desire to do what is best for students) and external events (policies, changes in teaching assignment, etc.). External conditions influencing OL are categorized as being primarily related to district history, environment and leadership. Within the category of district environment, the factors identified as being supportive of OL were a clear and articulated vision and mission, collaborative and harmonious culture, sense of community, school staff participation in decision-making, and policies and resources promoting learning.

Internal school conditions most associated with OL were a collaborative and collegial culture, teacher participation in decision-making, and availability of current and sufficient resources to support professional development initiatives. School leadership characteristics most associated with OL were clear vision, setting group goals, having high expectations, providing modeling, individualized support, providing intellectual stimulation, building positive culture, and encouraging teacher participation in decisions. The most commonly reported outcomes fell into the categories of practices, understanding, commitment and new skills.
Conclusions drawn from application of the five-variable framework include the declaration that OL processes vary widely and are supported to a greater degree than expected by district conditions that provide coherent and clear direction for schools. The framework provides a helpful perspective for understanding the variation among responses to educational change initiatives and their outcomes. Nonetheless, more than ten years later, more research is still needed to apply the framework to more varied situations, particularly in other countries and school systems.

In order to further explore the stimulus, process and outcomes of organizational learning for public schools, it is helpful to refer back to an earlier Leithwood study, with Jantzi and Steinbach (1995), “An Organizational Learning Perspective on School Responses to Change Initiatives.” This publication originated the five-variable framework used in the 1998 article, but more deeply explores the conditions in relation to one specific strategic change initiative. The central focus of the article is a longitudinal study of school policy implementation in British Columbia that involved substantial restructuring and produced mixed results among the six participating schools.

Events and dispositions that trigger OL were found to be both external and internal, and were significantly influenced by school mission, vision, culture. Characteristics associated with educators identifying their schools as learning organizations included a meaningful and pervasive vision/mission, structures for teacher participation in decision-making, short-term goals, a manageable number of initiatives, and follow-through on goals
and initiatives. Outcomes for schools operating as learning organizations included changes in practices, new understandings, increased commitment and the development of new skills.

For schools identified by teachers as being learning organizations, OL processes were described as encompassing informal, regular conversations, experimentation with new ideas, peer observation, and personal reflection on practice. Thus, leadership and school culture supporting such processes were identified as creating the conditions most associated with OL. Also, the authors point directly to the characteristics of school leaders as being highly influential on the OL that takes place in schools.

4I applied to schools. Since its inception in 1999, only a handful of studies have applied the 4I model to organizational learning in schools. In Pan and Chen’s (2011) study of Taiwan’s Teacher Professional Development Evaluation system as a catalyst for organizational learning, they use Crossan’s framework to help explain the behavior and performance of the organization as well as the processes and outcomes of learning. Data from their comparative case study revealed that the program led to learning at the individual, team and organizational level. The participatory nature of the program fostered a collaborative culture that led to institutionalization of new practices. They conclude:

The research findings indicated that teacher evaluation was a catalyst for organizational learning. From the cognitive perspective argued by Senge (1990) and Crossan et al. (1999), personal mastery of evaluation knowledge and skills were observed in the individuals. Shared understandings were shaped in groups concerning
what constitutes effective teaching and how to use evaluation to inform practices.

(p. 10)

In a 2007 study of classroom leadership, Strong-Rhoads applied the 4I frame to analyze the ways teachers develop leadership capacities. Findings suggested that the 4I framework was helpful in deciphering patterns of teachers experiences, highlighting “the importance of interpreting through reflection and collaboration intuition and automaticity,” and the ways, “institutions become well defined with mechanisms in place that ensure learning” (p. 143).

4I applied to policy implementation in schools. Research applying the 4I framework specifically to education policy implementation is limited. Within this literature review, for which several research databases were scoured using combinations of search terms including 4Is, schools, reform, and policy, only two studies were found. In Dalal’s 2008 dissertation study, the 4I model was used as a conceptual tool in a multiple case study of a district-level policy and its implementation at the school-level. Qualitative examination of teacher and school-leader perspectives corresponded well to the different levels and processes within 4I. Findings showed that, “grade level collaboration seemed to be a highly structured process that appeared to match what Crossan et al. (1999) calls an institutionalized and embedded routine within the school” (p. 219).

Alcantara (2009) employed organizational theory and change models to interpret implementation of technology policy. Survey and interview responses were interpreted through several OL and systems lenses, including 4I. Findings emphasized the importance of
intuiting and interpreting at the individual level and the role of evaluation and feedback at the organizational level.

Though few educational researchers have specifically applied the 4I framework to reform policy, many such as Datnow (2005) reference the central components of the model and underscore their importance in understanding policy implementation. In Datnow’s study of CSR models and their sustainability, the author concludes that, “the only schools that did not suffer or experience conflicts in the face of these state and district demands were those that had reforms well institutionalized—these were high capacity schools by all observers’ estimations. Reforms had become taken-for-granted features of daily life at the schools, and these schools enjoyed strong reputations and protected positions in the district” (2005, p. 142). Institutionalization, being the fourth and final stage in the 4I model, is thus the goal and, as Datnow’s conclusions suggest, highly connected to the success and sustainability of school reform efforts.

**Chapter Summary**

Organizational learning theory has emerged over the past two decades as a means to better understanding of school change. The preponderance of school reform efforts have created numerous opportunities to apply OL frameworks to policy implementation. Systems thinking, ecological paradigms, cognition and interpretation models and the 4I framework offer helpful tools for examining learning and change processes.

School reform policy has a long history of origination at the local and state levels. However, national level reform has only come about recently and the current shift to
Common Core Standards represents an unprecedented national level curriculum initiative. As schools across the country move to implement the new standards, educational researchers have a unique opportunity to study how this reform is translated through the federal, state and district levels and ultimately implemented by educators at the school level. This study sought to apply OL frameworks to make sense of the shift and examine school-level experiences in terms of how educators interpreted, integrated, initially implemented and ultimately moved to institutionalize the new curriculum standards. The following chapter outlines the methodology employed and provides an overview of the comparative case study approach utilized in the study.
CHAPTER 3

Methodological Approach

The purpose of this study was to explore the ways educators at the school level experienced a federally directed curriculum policy change, and to examine the contextual factors that impacted initial implementation. This chapter details the research process and describes the methods used for sample selection, data collection and analysis. The study sought to understand these experiences through an organizational learning (OL) lens, comparing data to OL models and frames. The following research questions framed the study:

1. How do schools respond to large-scale policy change?
2. How do teachers experience the shift to adopt Common Core State Standards?
3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?

A qualitative research paradigm was appropriate for this study for several reasons. The research questions were primarily focused on revealing complex contextual factors and individual experiences, generating answers that cannot be expressed numerically. While quantitative methods allow for analysis of specific responses from large numbers of participants, qualitative methods allow the researcher to delve into “selected issues in great depth with careful attention to detail, context and nuance” (Patton, 2002, p. 227). The nature of the research questions and small sample size of this study lent themselves to this type of in-depth and detailed examination.
Within the qualitative paradigm, a comparative case study design was used for this inquiry. The purpose of this research was to not only add to the knowledge base around educational policy, but also to illuminate implications for school leaders. When compared to other qualitative methods, a case study design was preferable for several reasons.

In *Case Study Research: Design and Methods*, Yin (2009) describes three conditions for selecting appropriate research methods: type of research questions, researcher control of behavioral events and focus on contemporary versus historical events (p. 8). Given that the research questions framing this study were all “how” questions, they favored case study methods. These types of questions seek answers that are more explanatory in nature and “deal with operational links needing to be traced over time, rather than mere frequencies or incidence” (Yin, 2009, p. 9). The content of the questions – contextual factors impacting individual and organizational policy implementation – also presented a good match to case study design; as Stake (2006) puts it, “case study issues reflect complex, situated, problematic relationships. They pull attention both to ordinary experience and also to the disciplines of knowledge” (p. 10).

In terms of Yin’s other two conditions, the study of policy implementation and the focus on the dynamics of the school organization are also a good match to case study design. In contrast to other research methods, “the case study’s unique strength is its ability to deal with a full variety of evidence –documents, artifacts, interviews, and observations – beyond what might be available in a conventional historical study” (Yin, p. 11).
In general, comparative case study design is preferable to study of a single case because study of more than one case increases the benefits of data analysis for deeper understanding and reduces the risks of investing the entire balance of time and resources into only one event or situation (Yin, 2009, p. 61). In this study, a comparative case study was used to better understand the phenomenon of Common Core implementation. Stake (2006) describes such a phenomenon as a “quintain”:

Multicare research starts with the quintain. To understand it better, we study some of its single cases – its sites or manifestations. But it is the quintain we seek to understand. We study what is similar and different about the cases in order to understand the quintain better. (p. 6)

For this particular study, the “quintain” encompassed all of the individual schools implementing the new standards. However, as Merriam (1998) points out, the question of how many cases to include, “depends on the questions being asked, the data being gathered, the analysis I progress and the resources you have to support the study” (p.64). The inclusion of two single but varied cases was intended to provide better understanding of the quintain in question, within the confines of dissertation study being undertaken by a novice researcher.

Site Selection and Participants

This qualitative analysis examined educators’ experiences implementing Common Core State Standards (CCSS) in two North Carolina public schools. In choosing the cases for this analysis, Stake’s (2006) three main criteria were considered:

- Is the case relevant to the quintain?
- Do the cases provide diversity across contexts?
Do the cases provide good opportunities to learn about complexity and contexts? (p. 23)

The intent of this comparative case study was to analyze the differing experiences of teachers in a school that has accelerated implementation, as opposed to those in a school that had implemented at slower pace closer to the minimum requirements of state and federal mandates. The cases selected for this study were chosen as purposeful samples because they represent these two varied approaches, providing meaningful diversity of contexts. The inclusion of multiple perspectives within each case provided the opportunity to examine the complexity of the contexts and quintain in question.

The selection process began by identifying two public school districts, with similar demographics, that had taken different paths with their plans to implement Common Core State Standards – one opting to implement the standards within selected grade levels a year in advance of the mandate, and the other waiting to adopt the standards for all grade levels at the same time, according to the state required time frame. This difference was determined through analysis of district Race to the Top (RttT) plans as posted on the North Carolina Department of Public Instruction website.

Garrel County Public Schools was the first district chosen, selected as an average sized district compared to others in North Carolina whose district administration had made the decision to implement Common Core Standards according to the state mandated timeline. Saye Elementary School was subsequently selected as a representative school within the district, being of average size and performance according their NC School Report Card, published online each year at www.ncschoolreportcard.org.
Demery Elementary School was also identified through the NC School Report Card website, according to its match to Sayer’s demographics. Demery is within the Scarboro County public school district, one of several districts across North Carolina that – in contrast to Garrel – chose an accelerated timeline for implementing Common Core State Standards. The acceleration meant that Demery phased in the Common Core standards for reading and math in grades K-2 a full year before Sayer. The principals of both schools were contacted by phone and email and agreed to, once approved by the NCSU IRB and through their own district approval processes, have their faculties participate based on the researcher’s description of the proposed study and its intended outcomes.

Sayer Elementary School is a K-5 public school in eastern North Carolina enrolling almost 650 students for the 2011-12 school year. After being designated the two prior years as a School of Progress within the NC ABCs accountability system, Sayer received no recognition for the 2011-2012 school-year. Sayer Elementary resides within a district that chose to implement Common Core State Standards according to mandates set by the state. According to their district RttT plan, professional development on the new standards was provided to all teachers during the 2011-2012 school year and district-created curriculum materials were made available in July of 2012. Full implementation of the standards in grades K-12 began with the start of the 2012-2013 school-year.

Demery Elementary School is a K-5 public school in the western part of North Carolina, enrolling just over 700 students for the 2011-12 school year. Demery Elementary was identified for this study because its recorded student achievement levels and school
demographics were an approximate match to those of Sayer. Like Sayer, Demery also went from being designated as a School of Progress the two prior years, to receiving no recognition within the NC ABCs accountability system for the 2011-2012 school-year. Both schools are also geographically located in small communities roughly 20 miles from larger cities. The primary difference between the two schools, that creates the kind of variation relevant to this study is that, unlike Sayer’s school district, the district in which Demery is located chose to expedite implementation of Common Core Standards by adopting them in grades K-2 during the 2011-12 school-year.

The unit of analysis for this research is the school, but the study included perspectives from teachers, school principals and district-level administrators. Participants in the study included all faculty and administration from both schools as well as the district administrator identified as being in charge of coordinating implementation of RttT and CCSS. Each case, Sayer and Demery, included both the school and district in which it operates, but analysis focused primarily on the experiences of teachers within the individual school.

**Procedures**

Data collection was conducted during the first semester of the 2012-2013 school-year and included the following methods: teacher surveys, focus group discussions, individual interviews with school and district administrators and document analysis. The intent in utilizing these four sources was to generate sufficient data to reach saturation and allow in-depth analysis. Additionally, the variety of sources and perspectives provides opportunities for triangulation, recognizing that, “each important finding needs to have at least three (often
more) confirmations and assurances that key meanings are not overlooked” (Stake, 2006, p. 33).

Three separate surveys were given to the entire faculty of both schools over the course of the study, for a total of six sets of survey results. During the research period, separate interviews were conducted with building level administrators and district RttT coordinators, and focus groups from each school faculty were convened twice. District and school-level artifacts and documents related to CCSS and RttT were collected for in-depth analysis and triangulation. The following table illustrates how these methods addressed specific research questions.

Table 3.1. Case study methods

<table>
<thead>
<tr>
<th>Methods</th>
<th>Sources</th>
<th>Time Frame</th>
<th>Unit of Analysis</th>
<th>Research Questions Addressed</th>
</tr>
</thead>
</table>
| Interviews        | District Coordinators School Principals | 1st round – Aug. ‘12 2nd round – Dec. ‘12 | District School  | 1. How do schools respond to large-scale policy change?  
|                   |                                       |                           |                  | 3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy? |
|                   |                                       |                           |                  | 3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy? |
|                   |                                       |                           |                  | 3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy? |
| Document Analysis | RttT plans Website content E-mails   | On-going, collected monthly | State District School | 3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy? |
First Round Interviews. In order to paint a detailed picture of the implementation process, interviews were conducted with administrators involved in shaping the experiences of the teachers in their school or district. These interviews with principals and district RttT coordinators treated them as key informants who were able to “provide the case study investigator with insights into a matter and also initiate access to corroboratory or contrary sources of evidence” (Yin, 2009, p. 107). The first round of interviews with principals and district coordinators were conducted in August 2012, before the beginning of the 2012-2013 school-year. The primary purpose of these interviews was to help answer the first and third research questions which pertain to the ways schools respond to policy change and the contextual factors related to implementation. The interviews were designed to be brief (lasting roughly 30 minutes each), and followed interview guides [Appendices C and D] outlining 11 open-ended questions around role-specific topics related to CCSS implementation.

RttT Coordinators. Upon being awarded the Race to the Top grant, the state of North Carolina directed each district to create their own plan for implementation. Within these plans, each district was to designate an RttT team, headed by a Race to the Top Coordinator. In many districts, this person was already a member of the central office administration and the title of RttT Coordinator was added to existing duties. The two RttT coordinators included in this study were both already in the role of being responsible for staff development and accountability before taking on the role of coordinator for implementing the grant.
The first round of interviews with Race to the Top coordinators were conducted at the office of each individual, both being located within their district’s central office complex. The interviews followed the outline of 11 questions specified in Appendix D and were recorded using a laptop computer and audio recording software. District coordinators were asked to describe where their district was in the process of implementing Common Core State Standards, their specific role in the process, the roles of other district leaders involved, and processes being conducted from the district level to move the process forward. These first interviews with district coordinators were the initial steps in identifying the contexts and processes impacting implementation.

Principals. Both of the school principals included in the study are female and had been the principal of their school for four years. Each of them had either earned a doctoral degree or was in the process if doing so. They both expressed that this factored into their reasons for agreeing to participate in the study and they were both enthusiastic about contributing. Initial interviews with the two principals were conducted in their offices on each school campus and were recorded on a laptop computer using audio recording software. During each interview, the principal was asked to describe their school’s current level of implementation, their role in the process, and various aspects impacting the ways their teachers engaged in the process. These interviews began the process of defining the context in which the individual schools and faculties were operating to implement the new standards.

Teacher surveys. In order to include as many teacher perspectives as possible within each case, open-ended questions were posed to all faculty at both schools via online surveys.
Given that these surveys asked teachers to provide candid and personal descriptions of their experiences, it was important for me to meet the faculty in person before the surveys were deployed. Each principal helped arrange a time for me to introduce myself and the study to their faculty. I was able to address each faculty during a whole-school meeting in August 2012, prior to the start of the school year. During these meetings, I described the study in detail and distributed the consent forms for the surveys. I also explained that I would be pulling together a focus group at each school and would send out an email to recruit the members of that group. Each principal was instrumental in helping to frame the study as an opportunity for teachers to include their voices in a larger discussion about education policy.

Three brief online surveys were deployed to the entire faculty of both schools during the study. The purpose of the surveys was to answer the second and third research questions, which pertain to the ways individual teachers respond to the shift to Common Core standards and the contextual factors that impact their experiences. The survey questions [Appendix B] included a mix of Likert scale and open-ended items intended to capture the perceptions of faculty at various points in the research cycle. The primary content of the survey items pertains to the teachers’ level of comfort with and implementation of the new standards. Over the three surveys, many of the questions remained the same, with minor adjustments in wording that referred to time frames within the study.

Each survey was constructed and deployed using a secure online survey tool, each having a unique web link that was sent to teachers in an email. The first of the surveys was deployed in late August and closed in early September. The second was deployed in late
October and closed early November. The last survey was deployed in December and closed before schools closed for winter break. Several reminders were emailed to teachers during the weeks that the surveys were open for responses. Response rates to the each survey are shown in Table 3.2.

Table 3.2. Teacher survey response rates

<table>
<thead>
<tr>
<th>School</th>
<th>Survey 1</th>
<th>Survey 2</th>
<th>Survey 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demery (50 teachers)</td>
<td>35 responses 70%</td>
<td>23 responses 46%</td>
<td>19 responses 38%</td>
</tr>
<tr>
<td>Sayer (45 teachers)</td>
<td>25 responses 56%</td>
<td>29 responses 64%</td>
<td>20 responses 44%</td>
</tr>
</tbody>
</table>

Survey results were compared longitudinally to track trends in implementation and on-going content analysis identified emergent themes that were used as topics for discussion in the teacher focus group meetings and follow-up administrator interviews. One additional goal of the first survey was to identify teachers seen by their peers as leaders in order to aid in focus group member selection.

**Formation of focus groups.** Adding to perspectives gained through surveys and individual administrator interviews, focus groups were convened to further illuminate teachers’ implementation experience. Focus group discussions are beneficial to this study for several reasons including, as Bogdan and Biklen (2007) describe:

They are particularly useful when the topic to explore is general, and the purpose is either to stimulate talk from multiple perspectives from the group participants so that the researcher can learn what the range of views are, or to promote talk on a topic that
informants might not be able to talk about so thoughtfully about in individual interviews. Group participants can stimulate each other to articulate their views or even to realize what their own views are. (p. 109)

The primary purpose of convening a focus group at each school was to conduct discussions with group analysis of, and elaboration on, issues and contexts that emerged from the surveys. This elaboration was intended to provide additional data in answer to the research questions 2 and 3. Question 12 of the first full-faculty survey asked teachers to identify up to three teachers they saw as being leaders in implementing the new standards. A list was compiled from each school of the identified faculty leaders. In order to create focus groups that mirrored the overall composition of each faculty in terms of grade levels and roles, half of each group was chosen from the “leader” list and the other half were chosen from the teachers not mentioned in that list.

The selected teachers were contacted via email to ask for their participation and share the informed consent form for involvement in the study. All teachers asked to participate responded that they were willing, establishing a focus group of six teachers at each school. Though some members were absent for one or both meetings (one teacher from each school failed to attend the two meetings), membership in the focus groups remained the same for both schools over the research period. The composition of each focus group is detailed in Table 3.3.
Table 3.3. Focus Groups

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
<th>Position</th>
<th>Race/Gender</th>
<th>Identified in Survey 1 Question12 (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sayer</td>
<td>Dona Disalvo</td>
<td>K</td>
<td>Caucasian/Female</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Liza Aasen</td>
<td>Literacy</td>
<td>Caucasian/Female</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Loraine Vancleve</td>
<td>2</td>
<td>Caucasian/Female</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Noemi Brennen*</td>
<td>3</td>
<td>Caucasian/Female</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Sofia Munden</td>
<td>4</td>
<td>Asian American/Female</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Shanna Wiens</td>
<td>5</td>
<td>African American/Female</td>
<td>no</td>
</tr>
<tr>
<td>Demery</td>
<td>Fay Blume</td>
<td>K</td>
<td>Caucasian/Female</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Lacey Mckenny</td>
<td>1</td>
<td>Caucasian/Female</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Keri Arp</td>
<td>2</td>
<td>Caucasian/Female</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Dena Schug</td>
<td>3</td>
<td>Caucasian/Female</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Lizzie Wieland</td>
<td>4</td>
<td>Caucasian/Female</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Consuela Daws*</td>
<td>5</td>
<td>African American/Female</td>
<td>yes</td>
</tr>
</tbody>
</table>

*Agreed to participate, but did not attend meetings

According to the availability of the teachers in each group, the first focus group meetings were set for after school in early October. Each discussion followed the protocol detailed in Appendix E and lasted approximately 30 minutes. All focus group members in attendance (five of the six at each school) signed an Informed Consent form before the start of the discussion. The meetings were video-taped using a laptop and video editing software. During this first discussion, teachers were asked to describe their current levels of implementation, identify challenges they faced, resources and activities that were helpful to them and ways the school and district was supporting implementation. They were also asked to elaborate on themes that emerged from faculty responses to similar questions in the first survey. This first focus group meeting illuminated several dimensions of what teachers were experiencing within the first few weeks of the school year and provided counterpoints and corroboration to what had been expressed by their fellow faculty members, their principals and their districts’ RttT Coordinators.
2nd round interviews and focus groups. Follow-up meetings were arranged in December to conduct a second round of separate discussions with RttT Coordinators, principals and focus groups. The interviews and focus group meetings followed the same process outlined for the first round and, with the exception of one RttT coordinator inviting another district administrator to join him, included the same individuals who participated in the first round. The protocols for each discussion are detailed in Appendices C, D and E.

At this point in the process, two of the three teacher surveys had been deployed and initially analyzed for emergent themes. In this second round, each principal, district coordinator and focus group member was asked to react to and elaborate on each theme. The themes themselves represented common responses to questions regarding challenges, supports and contextual factors impacting teachers’ implementation of the new standards. These second round discussions helped capture different perspectives on the common themes and provided added dimension to the full picture of the implementation process.

Document analysis. Over the course of the study, CCSS-related artifacts were also collected from the schools themselves, emails forwarded from principals and school, district and state department websites. The purpose of collecting these artifacts was to provide further background for comparison to data gathered from the other three primary methods. The intention was to collect both digital and hard copy documents related to implementation at the school level. However, as will be detailed further, the amount of collected documents was fewer than anticipated and most documents collected were in digital formats from emails and websites.
Upon my first visit to each school, the secretary was asked to designate a mailbox in which to collect copies of pertinent documents over the course of the study. At both schools, the designated box was located within the space dedicated to staff and faculty mail, in order to facilitate convenient collection of materials that are distributed in such a manner. The list of anticipated documents included faculty memos, meeting agendas, PLC minutes, professional development handouts, and/or district communications. Each time I visited the campus, I checked the box for such artifacts but found that the only materials placed there were unrelated to Common Core or RttT. I asked each principal about this and they confirmed that the vast majority of communication about Common Core was done via email and website postings.

Collection of digital documents was accomplished by archiving emails forwarded by principals, downloading documents posted on school, district and state websites, and periodic snapshots of the web pages themselves. Field notes were also recorded during or immediately after each visit to the two school campuses to provide background documentation of the other data being collected. Analysis of these digital communications, field notes and artifacts provided the opportunity to discover details within the regular school routine that, “participants in those routines may take … so much for granted that they cease to be aware of important nuances that are apparent only to an observer who has not become fully immersed in those routines” (Patton, 2002, p. 262).
Data Analysis

The primary data sources for this study were surveys, interviews, and focus groups. As Creswell (2009) suggests, “qualitative data analysis is conducted concurrently with gathering data, making interpretations, and writing reports” (p. 184). As dictated by the qualitative and emergent nature of the examination, data analysis began at the start of the research period and continued throughout the research process. Recognizing that “ideas for making sense of the data that emerge while still in the field constitute the beginning of analysis,” (Patton, 2002, p. 436), preliminary field notes and observations initiated the analysis process and were on-going.

Each data source was logged, analyzed and hand-coded to identify emerging themes and patterns. Notes and transcripts from each school were organized separately and individual electronic folders were established for each interviewee and focus group. Logging of data sources included dates of collection as well as detailed notes, records of data analysis and emergent codes. Several technology tools were employed to assist with organizing and expediting the analysis process, but the analysis itself remained firmly in the hands of the researcher. Online survey systems and content analysis tools were utilized to make the task more manageable; however, as Patton (2002) points out, “the qualitative analyst doing the content analysis must still decide what things go together to form a pattern, what constitutes a theme, what to name it, and what meanings to extract from the case studies” (p. 442). Thus, while databases, spreadsheets, word-processing and word-frequency visualization tools were
employed, many digital pieces were printed, physically arranged and manipulated by hand to identify patterns and coding systems.

Word frequency within participant responses was determined using the web-based visualization tool, Wordle (www.wordle.net). Wordle analyzes text to visually reveal the most frequently occurring words within the text by making those words appear larger than others. For this study, Wordle was employed for initial content analysis of surveys and transcribed interviews. As McNaught and Lam (2010) found in their study of Wordle use in research processes, “Wordle seems to be particularly useful for studies that involve qualitative/thematic analyses of written or transcribed spoken text.” (p. 631).

Codes were not determined in advance; but were identified and defined as they surfaced from the data in relationship to the research questions. However, certain types of codes were anticipated to include: setting and context, definitions of situations, perspectives held by the subjects, subject’s ways of thinking about people and objects, processes, activities, events, strategies, relationships and social structures, narrative, methods, and predetermined components of the 4I Framework (Bogdan & Biklen, 2006, p. 174-180). Data coding and analysis was an ongoing process throughout the study.

At the conclusion of the study, the collected data was revisited for a final holistic review. This provided another layer of analysis to authenticate preliminary patterns, codes and themes. Repeated close examination and hand-coding offered the opportunity to “live” with the data, resulting in a more profound understanding of outcomes. The entire process
can be summarized according to Creswell’s (2002) representation of data analysis and qualitative research as shown in figure 3.1.

*Figure 3.1. Creswell’s Data Analysis in Qualitative Research*

It is worth noting, as Creswell (2002) does, that though the figure presents the process as linear and hierarchical, “the various stages are interrelated and not always visited in the order presented” (p. 185). Thus, while the research did begin with raw data and end with final interpretations and conclusions, the intermediate stages were recursive.

**Validity and Reliability**

Qualitative researchers generally approach issues of validity and reliability from a different angle than positivists. Where quantitative research aims for generalizability of findings, naturalistic inquiry pursues trustworthiness. When qualitative researchers ask, “Is it valid?” they are essentially asking, “Does it ring true?” Both validity and reliability point to the credibility of the process, the outcomes and the conclusions.
In order to ensure the trustworthiness of this study, I included triangulation of data and peer review. In general, triangulation strengthens credibility by comparing multiple methods and/or sources of data. Peer review provides the researcher with a perspective external to the study that can evaluate the quality of the research with a critical eye.

“The logic of triangulation is based on the premise that no single method ever adequately solves the problem of rival explanations” (Patton, 2002, p. 555). The three primary data sources previously outlined were triangulated by comparing the data collected via each method. Data was also triangulated among different sources, comparing data collected from survey respondents, interviewees, focus group members and school documents. While members of each of these groups overlapped somewhat, each represents a different set of participants and perspectives.

Peer review was also used to strengthen the validity and reliability of the study. The process of engaging critical friends and eliciting varying perspectives on the research processes and findings helps to build critical reflexivity. Lomax, Woodward, and Parker (1996) define the role of critical friends in validating research findings as “insiders” who, having special knowledge of the research context “are in a position to verify the authenticity of the research” (Lomax, Woodward, & Parker, 1996, p. 154). Over the course of the study, I engaged a fellow doctoral student as a peer reviewer, as well as eliciting on-going feedback from my committee chair.

In addition to the afore described methods of ensuring the credibility of the study, specific attention was given to the unique context of the case study genre. Within the
qualitative paradigm, case study demands a distinct set of tools and principles. Piantanida and Garman (2009) contend that “each genre of qualitative research, like various forms of ballgames and literary works, embodies its own set of conventions” (Piantanida & Garman, 2009, p. 73).

Quality criteria for case studies, though embracing many of the tenants of other naturalistic approaches, diverges in the specific tactics used to ensure validity and reliability. As with other qualitative approaches, the ideas of trustworthiness and credibility rank high on the priority list, but validity and rigor rely on several additional factors.

Yin suggests several specific approaches to logical tests of reliability and validity. They are summarized in table 3.4.

Table 3.4. Case study tactics for four design tests (Yin, 2009, p. 41)

<table>
<thead>
<tr>
<th>Tests</th>
<th>Case Study Tactic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct validity</td>
<td>• Use multiple sources of evidence</td>
</tr>
<tr>
<td></td>
<td>• Establish chain of evidence</td>
</tr>
<tr>
<td></td>
<td>• Have key informants review draft case study report</td>
</tr>
<tr>
<td>Internal validity</td>
<td>• Do pattern matching</td>
</tr>
<tr>
<td></td>
<td>• Do explanation building</td>
</tr>
<tr>
<td></td>
<td>• Address rival explanations</td>
</tr>
<tr>
<td></td>
<td>• Use logic models</td>
</tr>
<tr>
<td>External validity</td>
<td>• Use replication logic</td>
</tr>
<tr>
<td>Reliability</td>
<td>• Use case study protocol</td>
</tr>
<tr>
<td></td>
<td>• Develop case study database</td>
</tr>
</tbody>
</table>

Many of the areas listed above were incorporated as specific elements for evaluation via triangulation and peer review. However, as emergent themes were included in follow-up
discussions and interviews, the participants themselves were also able to attest to construct validity. Fellow researchers, doctoral students and my committee chair – in the role of critical friends – provided valuable perspectives on construct and internal validity. Their reflection, as well as my own (kept in the form of a research journal), helped to establish validity in terms of logic, explanation building and addressing rival explanations. My adherence to protocols and models such as those presented by Yin and Stake facilitated a chain of evidence, pattern matching and reliability. In essence, Yin’s tactics for the four tests served as a frame for all methods used to ensure the validity and reliability of the study.

Subjectivity Statement

The choice to study teachers as they implement education policy is strongly tied to my work as an educator and staff developer. My approach to this type of research project is unavoidably skewed by personal and professional predispositions. The different roles I have played in the education system give me a strong background of knowledge in the area and most definitely shape my perspective on the topics at hand. As a former public school teacher, I consider the subject with a set of experiences and attitudes that influence both my understanding of concepts and interpretations of data. My experiences working with schools run the entire spectrum from overwhelmingly positive and successful, to exceedingly negative and ineffectual. My perception of reform efforts in schools has been informed by my role as an outside consultant with a somewhat clinical focus on process, outcomes and program fidelity. In approaching this study, I possessed a perspective that I feel combines the viewpoint of both a former insider and the outside facilitator.
As with any type of research, my perspective is also slanted by personal demographics. As a white, middle class female, I approach the topic, subjects and settings with these inherent biases. Given that this profile closely matches the demographics represented by many of the teachers in the study, there may have been limitations to my ability to adequately scrutinize all sides of the issue.

The sites that were selected for this study were chosen, in part, because they were not within any of the school districts I have worked with professionally. This helped create a useful distance between the subjects and myself. However, the details of my professional and personal background should be taken into account as a facet of the study and its findings.

**Ethical Issues**

The North Carolina Institutional Review Board (IRB) provides strict guidelines for ensuring the ethical integrity of any research endeavor. These guidelines specifically serve to protect the subjects of research from any unnecessary or excessive risk that may result from their participation. In accordance with IRB guidelines, I addressed the following three areas: the risks related to my study, minimization of these risks, and how these risks are balanced by benefits.

The risks associated with case study research are similar to other areas of behavioral science research that involves human subjects. In order to minimize these risks, guidelines of the IRB were closely followed for obtaining informed consent from all participants. The professional risks to participants in this study were minimized through several measures that provided for their anonymity. In order to ensure confidentiality, pseudonyms are used in
place of actual names and locations, and other identifying details were changed or excluded. All printed data and associated hard copy documents were stored securely in a locked cabinet at the business office of the researcher. Electronic data was stored in password protected folders to further ensure privacy.

Given the nature of the study, relationships did develop between myself and participants, and I was, as hoped, welcomed in each school as a member of their educational community. This dynamic made it extremely important for me to be constantly aware of my positionality and role as a researcher. Throughout the study, I remained conscious of my role as an outsider and avoided using relationships to inappropriately manipulate or exploit any of the participants. The guidelines of the IRB were strictly followed in regards to this issue.

To further protect the rights of participants, the research processes and findings were made transparent to them throughout the study. I repeatedly and explicitly delineated the purpose for the study and explained its potential for improving schools and adding to the body of knowledge about school reform. Participants did not receive material or monetary compensation for participating in the study, but I did explain their role in creating positive outcomes and contributions to both local and general knowledge.

Limitations of the Study

The design of this study as qualitative case study research poses several limitations to the generalizability of results. One significant limitation is the sample size, which was confined to the faculties of two schools and only one central office administrator from each district. The time period of the study was also limited to only a portion of one school year.
Given these two limitations, traditional external generalization would be very difficult to achieve. However, within the field of qualitative research, the type of formalistic generalization associated with the positivistic paradigm is not considered to be practically beneficial. Quantitative research, “relies on statistical generalization, whereas case studies (as with experiments) rely on analytic generalization” in which the researcher is, “striving to generalize a particular set of results to some broader theory” (Yin, 2009, p. 43). This study accepts limitations to external generalization, and aspires instead to generalize results within organizational and educational reform theory.

An additional limitation rests in the fact that the study was conducted by a novice researcher. As a doctoral student, my limited experience with designing and directing research has an impact on the overall quality of the study. However, through acknowledgment of this fact, and reliance on the ongoing guidance of my committee members, I hoped to ensure the quality and rigor of the research process and findings.

**Chapter Summary**

This chapter outlines a study that attempts to illuminate the ways educators at the school-level experience a federally directed curriculum policy change. Through the use of a comparative case study design, this study sought to uncover and examine the contextual factors that impacted the way the policy was initially implemented. The chapter began with an overview of the study, including the purpose of the study and the guiding research questions. The choice of a qualitative case study methodology was explained and justified within the context of the study. The site and sample choices were described in terms of
selection criteria. A description of procedures for collecting and analyzing data was provided. Issues of validity and reliability were addressed within the framework of case study research, as were issues of ethics, researcher bias, and study limitations. The following chapter will provide a detailed account of findings from this research.
CHAPTER 4

Findings

Introduction

The purpose of this study was to explore the ways educators at the school level experience a federally directed curriculum policy change and to examine the contextual factors that impacted the way it was initially implemented. The following questions frame the study:

1. How do schools respond to large-scale policy change?
2. How do teachers experience the shift to adopt Common Core State Standards?
3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?

The focus of this research was to add to the knowledge base around educational policy, and illuminate implications for school leaders. A comparative case study design was employed for this study. This chapter provides an analysis of the data gathered through interviews, surveys, focus groups and collected documents from each case.

In early 2012, I identified two public elementary schools in different North Carolina school districts to conduct a comparative case study of teachers’ experiences implementing the newly adopted Common Core State Standards (CCSS). The two schools were selected based on matching demographics and student academic achievement levels. The key difference of interest was that one school had implemented the standards one year ahead of
the state-mandated timeline, whereas the other school paced their implementation as
required.

Once I identified each school and their districts approved their participation in the
study, I contacted each principal to request their assistance and begin the process [Appendix
K]. I provided a detailed explanation of the study, its purpose and the process by which I
would collect data from interviews with them, surveys of their faculty and meetings with a
focus group of selected teachers. During the spring of 2012, I also contacted the Race to the
Top (RttT) grant coordinator (responsible for overseeing Common Core implementation) in
each district to explain the process and request their participation.

The first interviews with principals and RttT coordinators were conducted in August
2012, just before the start of the 2012-2013 school-year. Each participant signed the
Informed Consent Form for Research [Appendices G & J] before the interviews began. Each
interview followed a protocol of open-ended questions [Appendices C & D], was recorded
using a laptop and audio recording software and was transcribed verbatim by the researcher.
Both districts, schools, and all participants were assigned pseudonyms to protect
confidentiality. The intent of interviews with administrators was to provide background from
district and school leader perspectives and gain insight into processes that led up to the first
year of implementation.

During this same time period, I was introduced to teachers during a faculty meeting at
each school and deployed the first of three online surveys via email. These surveys included
informed consent [Appendix I] as the first question and followed the protocol of likert scale
and open-ended items detailed in Appendix B. The primary purpose of these surveys was to uncover common themes to be explored in the teacher focus group meetings and follow-up administrator interviews. One additional goal of the first survey was to identify teachers seen by their peers as leaders, in order to aid in focus group member selection.

Two separate focus groups were convened with 6 teachers from each faculty. Selection of focus group members was based on two factors: a) the results of the first teacher survey, including a mix of teachers identified by their peers as leaders and those who were not, and b) creating a range of grade levels within each group. Each school focus group met twice, once in early October and again in December, and engaged in discussions following the protocol in Appendix E. Each participant signed the Informed Consent Form for Research in Appendix H before the first discussion. All discussions were recorded on a laptop using video recording software and were transcribed verbatim by the researcher. The purpose of the focus groups was to expand upon the themes that emerged from the faculty surveys and further illuminate the perspectives and experiences of teachers as they began implementing Common Core.

Follow-up interviews were conducted with principals and Race to the Top (RttT) coordinators in December, 2012 to revisit the administrative perspectives at the school and district levels. These interviews provided valuable information to round out the full picture of implementation processes and triangulate with teacher descriptions of the same. Relevant documents were also collected over the course of the study to provide additional contextual data and an additional point for triangulation.
Participants and Context

**Garrel County Public Schools.** Garrel County was the first district chosen, selected as an average sized North Carolina district whose district administration had made the decision to implement Common Core Standards following the state mandated timeline. According to their state-level Race to the Top (RttT) plan, each NC district was directed to adopt the new standards by the beginning of the 2012-2013 school year, with the option to implement earlier in select grade levels and/or subject areas as deemed appropriate by district leadership. Garrel County Schools opted to designate the 2011-2012 school-year as a training period that would lay the groundwork for full implementation starting in August of 2012. The district RttT plan clearly specifies this as a performance measure, “100% of PCS teachers and administrators will be trained in the CCSS/NCES during the 2011-2012 SY” (Garrel RttT plan 2012, Year 2, Required Activities).

The Garrel County school district is geographically located in the eastern part of the state, encompasses a medium-sized city, with a state university, that is surrounded by smaller and primarily rural communities. For the 2012-2013 school-year, Garrel has 36 public schools, 21 of which serve grades K-5. All of Garrel’s elementary schools are classified as Title 1, with at least 40% of their students coming from poor families and eligible for the free or reduced lunch program. For the 2011-2012 school-year, the district as a whole met 50 of 67 Annual Measurable Objectives as outlined in No Child Left Behind and had a high school graduation rate of 73%. As of 2011, within its elementary schools, 98% of Garrel teachers
were fully licensed (the state average was 99%) and 100% were labeled by the state according to NCLB as being highly qualified, which was equal to the state average.

**Garrel RttT Coordinator.** Neil Goods’ official job title is Garrel County Schools’ RttT Coordinator, and he is designated as such in the Garrel County Schools RttT plan. Before coming to this position, he was a school administrator within the district. When asked during the first interview to describe his role, Neil responded:

> I see my role as kind of the I guess I’m the one that has to catch the vision and communicate it to everyone else. And, um, I’m kind of right now I’m the go to person for all of this stuff. They call me with all the questions and I wish I had all the answers but I feel like I don’t know a lot and then DPI doesn’t know a lot (laughs) and we all just exist and don’t know a lot (laughs). I really think my job is to focus everyone and get them in the same direction.

**Scarboro County Public Schools.** Scarboro is one of several districts across North Carolina that – in contrast to Garrel – chose an accelerated timeline for implementing Common Core State Standards. The acceleration meant that elementary schools in the district phased in the new standards for reading and math in grades K-2 during the 2011-2012 school-year, a full year before the mandated timeline. Scarboro County school district is in the western part of North Carolina, encompassing a small city and many surrounding suburban and rural communities. The district lies less than 30 miles from a major metropolitan area with a state university and several private colleges.
For the 2012-2013 school-year, Scarboro encompasses 38 public schools, 20 of which serve grades K-5. Half of Scarboro’s elementary schools (including Demery) are categorized as Title 1 schools. As of 2011, within its elementary schools, 100% of Scarboro teachers were fully licensed (the state average was 99%) and 100% were labeled according to NCLB as being highly qualified. For the 2011-2012 school-year, the district as a whole met 80 of 83 Annual Measurable Objectives as outlined in NCLB and had a high school graduation rate of 86%.

**Scarboro RttT Coordinator.** Lance Harner is Director of Planning and Accountability for Scarboro County Schools. Before coming to this position, he held a similar administrative position in another public school district. In the Scarboro County RttT plan, Lance is listed as a member of and primary contact for the Local Implementation Team. The district plan does not designate an official grant coordinator, nor does anyone in the district hold this title. However, when asked, the principal at Demery and the research contact at the central office both identified Mr. Harner as the person acting in the role of coordinator for RttT.

When asked to participate in this study as the district coordinator, Mr. Harner hesitantly agreed to represent this perspective and pointed out how strongly he relies on the entire implementation team. When asked to describe his role, Lance described it thus:

I find my role is just coordinator, that’s probably the easy term. I coordinate, um, the writing of the application itself, so at least annually, bring the team together to reflect on what we’ve accomplished, you know what we said we were going to do, did we do it? Where are we in the process?
For the second round interview in December, Lance requested that another key member of the implementation team, Assistant Superintendent of Curriculum and Instruction, Clinton Tokar, to join the meeting and add his perspective. It was made obvious by this inclusion and Lance’s repeated mention of other team members that district coordination was seen as a collaborative effort that depended on more than one person.

**Selected Schools**

**Sayer Elementary School.** Sayer Elementary School is a Title 1 PK-5 Garrel County school on a traditional calendar. Sayer is located in a rural community in eastern North Carolina, near to a mid-sized city. Sayer enrolled almost 650 students for the 2011-12 school-year. After being designated the two prior years as a School of Progress within the NC ABCs accountability system, Sayer received no recognition for the 2011-2012 school-year. Of Sayer’s 45 teachers, 100% are certified and 97% are identified as highly qualified. One quarter of the faculty has advanced degrees, one fifth are national board certified, and nearly half have over 10 years of teaching experience. Each of these statistics fall very close to the state averages for public PK-5 schools.

**Principal Carlene Yeadon.** August 2012 was the start of Dr. Yeadon’s fourth year as principal of Sayer Elementary. Carlene had recently received her doctoral degree in the area of school leadership. She sees herself as a hands-on administrator who works closely with her faculty but also trusts them to do what is best for students. She described in our first
interview:

When I came here to this school, you know, teachers wanted me to tell them “I want you to do this and this and this and this.” And since I’ve been here I’ve tried to make sure they’re empowered so that they’re making those decisions. And, as long as they’re within that perimeter of doing what’s right for children and they’re basing it on the research.

Carlene described herself as a member of a strong team that includes leaders within the faculty and in Garrel’s central office. When asked to describe her role in Sayer’s implementation of the Common Core State Standards, she responded:

Well, my role is to be inspecting what I expect from them and to try to be a step ahead of them as we all learn together. I’ve told them this is my fourth year here and I told them from the get-go that I don’t know it all. There’s no way to know everything but I try to know as much as I can. I know the people I can go to to ask.

Teachers in the focus group. Six Sayer teachers were selected for participation in a focus group. Of the six, three had been identified by their peers in the first survey as being leaders within the faculty. All of the Sayer focus group members are female, four are Caucasian, one is African American and one is Asian American. All but one of them teaches in a regular grade level classroom, with one teacher acting as a literacy specialist for the lower grades. Five of the six who agreed to participate attended both focus group meetings. Their average years of experience is 12, with two of the five having more than 15 years of experience.
Table 4.1. Sayer focus group members

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
<th>Position</th>
<th>Race/Gender</th>
<th>Experience</th>
<th>Identified in Survey 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sayer</td>
<td>Dona Disalvo</td>
<td>K</td>
<td>Caucasian/Female</td>
<td>20 years</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Liza Aasen</td>
<td>Literacy</td>
<td>Caucasian/Female</td>
<td>18 years</td>
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</tr>
<tr>
<td></td>
<td>Loraine Vancleve</td>
<td>2</td>
<td>Caucasian/Female</td>
<td>10 years</td>
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</tr>
<tr>
<td></td>
<td>Noemi Brennen*</td>
<td>3</td>
<td>Caucasian/Female</td>
<td>n/a</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Sofia Munden</td>
<td>4</td>
<td>Asian American/Female</td>
<td>7 years</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Shanna Wiens</td>
<td>5</td>
<td>African American/Female</td>
<td>5 years</td>
<td>no</td>
</tr>
</tbody>
</table>

* Agreed to participate but did not attend the meetings.

Demery Elementary School. Demery Elementary is a PK-5 Scarboro County school on a traditional calendar, located close to a small city and within 50 miles of a larger metropolitan area. Demery enrolled almost 700 students for the 2011-2012 school-year and, like Sayer, also went from being designated as a School of Progress the two prior years, to receiving no recognition within the NC ABCs accountability system. Of Demery’s 50 teachers, 100% are certified and labeled highly qualified. One third of the faculty has advanced degrees, one fifth are national board certified, and nearly half have over 10 years of teaching experience.

Principal Alison Blanford. At the time of this study, Alison was in the final phase of completing her doctoral degree in education leadership and beginning her fourth year as principal of Demery. She viewed herself as the person responsible for communicating expectations and supporting her faculty in meeting them. When asked during the first interview to describe her role in implementing the new standards, she responded:

I think my role has been more or less to stay informed of the curriculum and make sure that I’m disseminating the information that comes from the county office so that
teachers understand the changing expectations. I think it’s just being very hands-on with it, and letting teachers know that this is the expectation and supporting them as far as what materials do they need because some materials may be different.

*Teachers in the focus group.* Six Demery teachers were selected for participation in a focus group. Of the six, three had been identified by their peers in the first survey as being leaders within the faculty. All of the Demery focus group members are female, five are Caucasian, and one is African American. All of them teach in a regular grade level classroom. Five of the six who agreed to participate did attend both focus group meetings. Their average experience is 8 years, with two of the five having more than 10 years of teaching experience.

*Table 4.2.* Demery focus group members

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
<th>Position</th>
<th>Race/Gender</th>
<th>Experience</th>
<th>Identified in Survey 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demery</td>
<td>Fay Blume</td>
<td>K</td>
<td>Caucasian/Female</td>
<td>13 years</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Lacey Mckenny</td>
<td>1</td>
<td>Caucasian/Female</td>
<td>14 years</td>
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</tr>
<tr>
<td></td>
<td>Keri Arp</td>
<td>2</td>
<td>Caucasian/Female</td>
<td>2 years</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Dena Schug</td>
<td>3</td>
<td>Caucasian/Female</td>
<td>7 years</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Lizzie Wieland</td>
<td>4</td>
<td>Caucasian/Female</td>
<td>3 years</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Consuela Daws*</td>
<td>5</td>
<td>African American/Female</td>
<td>n/a</td>
<td>yes</td>
</tr>
</tbody>
</table>

* Agreed to participate but did not attend the meetings.

**Presentation of Findings**

This section details the analysis of and findings from the collected data. Analysis began at the start of the study and continued throughout the data collection period. Constant comparison between and among the different sources revealed significant links and
variations to be further explored. Though primarily associated with grounded theory, the constant comparative method was an appropriate fit for this study. As Merriam (1998) points out, “Because the basic strategy of the constant comparative method is compatible with the inductive, concept-building orientation of all qualitative research, the constant comparative method of data analysis has been adopted by many researchers who are not seeking to build substantive theory” (p. 159).

Within this study, each level of analysis informed the following phases of data collection and emergent themes provided direction for continued inquiry. In order to understand this incremental stream of collection and analysis, it is important to examine the flow of data. The first part of this section outlines this flow before transitioning into a discussion of how specific findings answer each of the three research questions framing the study.

Flow of data and analysis. As described in the previous section, initial discussions with principals and RttT coordinators helped to establish the landscape against which implementation was taking place. During the first round of interviews in August 2012, both principals and district coordinators were asked to describe what they were seeing at that point. For Garrel County and Sayer Elementary, just beginning the process, administrators described this initial phase. Neil Goods characterized the level of implementation across Garrel County in this way:

We’re not implementing yet (laughs). We start next Monday. I mean, we didn’t really implement last year. We had a couple of schools that wanted to pilot a little bit so we
had two middle schools that did some work with ELA but they were still using the old standards because that was what we were being tested on. …there weren’t any other real implementation strategies.

Carlene Yeadon’s comments pointed to how her teachers were feeling about starting the process:

As they begin the year …. they are a little apprehensive. They are… I think they’re excited and nervous at the same time. As we talked today, they’re building the plane while they’re flying and they’re trying to get the wheels on there so they won’t crash, just in case, you know they’re up and down, you know.

The picture in Scarboro County, where K-2 implementation had begun the previous year, was somewhat different. Lance Harner summarized the level of implementation across the district:

Well, I would describe the current level of implementation as for K-2 as… I would still describe it as beginning implementation. After going through one year of implementation, I would say there is variation in implementation that is significant, at this point and, of course, if there were a term for before beginning, I would suggest that our grades above K-2 are at that stage now. They’re learning where it all connects and how it fits and how it translates from what they knew to what they need to do now. I would say K-2 would probably be further along if the assessment were more aligned to the Common Core. However, that’s not the case, so the transition, I think, until you assess what you expect, you’re going to have a disconnect. So, I
suspect that our grades three and up will almost make the transition faster after this year when they see “oh this is what they’re talking about” in terms of assessment.

Alison Blanford’s description of implementation at Demery echoed much of Mr. Harner’s description, but pointed to specific areas she saw as a challenge:

I feel very comfortable with where my K-2 teachers are because they have had that year to really look at the curriculum. There have been some activities to help them unpack the curriculum. I think this is going to be, for 3-5 teachers, not so much in reading, because last year we decided to go full-blown reader’s workshop here. I think that a lot of those practices lend themselves to Common core with the deeper thinking, problem solving but I really think our teachers may struggle this year with math, because there just hasn’t been that explicit instruction for them, that explicit professional development.

The first faculty survey was deployed via email in late August, at the beginning of the school-year. Teacher responses corroborated much of what principals and RttT coordinators described, adding dimension as to their current comfort and implementation levels. Of the 25 Sayer teachers who completed the first survey, 37% reported that they were fully implementing the new standards, 21% were partially implementing, 25% were developing and 17% said they were just beginning. Only 8% said they were very comfortable with the new standards, 50% were somewhat comfortable, 34% were somewhat uncomfortable, and 8% were not at all comfortable. Given the opportunity to comment on their ratings, one respondent added, "Common Core seemed very daunting to me coming into this school-year."
However, two weeks in, I feel as though I am getting the hang of it." Another respondent commented, "It is a LOT of change all at the same time and I could name several teachers who are very close to their breaking point. It's going to be a challenging year."

Of the 35 Demery teachers that completed the first survey, 56% indicated that they were fully implementing the new standards, 22% were partially implementing, 13% were developing and 9% said they were beginning. In rating their comfort level with the new standards, 12% said they were very comfortable, 69% were somewhat comfortable, 16% were somewhat uncomfortable, and 3% were not at all comfortable. One respondent commented on their feelings about the standards, saying, "I am excited to be using these new standards which I believe will really benefit our students." Another respondent added, "Just feel pressured!"

Given that the majority of the survey questions were open-ended or provided opportunities for longer narrative comments, these responses were analyzed separately for recurrent content. Though content analysis has historically been associated with quantitative studies, “in its adoption for use in qualititative studies, the communication of meaning is the focus” (Merriam, 1998, p. 160). This type of analytic induction was employed to initially identify emergent themes in participant responses. Word frequency within these responses was analyzed using the web-based visualization tool, Wordle (www.wordle.net). Wordle processes text to create “word clouds,” revealing the most frequently occurring words within the text by making those words appear larger than others. This is beneficial because “an understanding of the general composition of the frequently used words allows viewers to
have an overview of the main topics and the main themes in a text” (McNaught & Lam, 2010, p. 630).

For this study, Wordle was employed for preliminary analysis. As McNaught and Lam (2010) found in their study of Wordle use in research processes, “Word clouds can be a useful research tool to aid educational research,” allowing “researchers to quickly visualize some general patterns in text” (p. 641). Figure 4.1 gives an example of one word cloud created from the first survey and used to identify emergent themes.

Figure 4.1. Wordle analysis - Garrel survey 1 question 9: Challenging conditions

Once responses to the first survey were compiled and initially analyzed for emergent themes, the first focus group meetings were convened in early October to begin adding dimension to what had been revealed. The primary purpose of these first meetings was to elaborate on the themes that emerged from survey questions five through nine. The second
teacher survey was given mid-way through the first semester, in late October. From Sayer, 29 teachers completed the second survey, as did 23 Demery teachers. Responses to the second survey were analyzed similarly to the first and the emergent and continued themes were explored during the second round focus groups and interviews with principals and district coordinators. Though the focus group discussions followed the same protocols [Appendix E], the themes explored differed according to those that emerged from the varied survey responses. Table 4.4 outlines the connections between the first two surveys and each of the second round discussions.

Table 4.4. Survey themes indentified from surveys and explored by focus groups

<table>
<thead>
<tr>
<th>Surveys</th>
<th>Survey Items Revealing Themes</th>
<th>Sayer Emergent Themes</th>
<th>Demery Emergent Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey 1</td>
<td>What do you see as the possible advantages of Common Core standards?</td>
<td>Creating consistency</td>
<td>Creating consistency</td>
</tr>
<tr>
<td>8/27-9/9</td>
<td>What do you see as the biggest challenges to implementing Common Core standards?</td>
<td>Time (lack of) Pacing</td>
<td>Changing teaching practice</td>
</tr>
<tr>
<td></td>
<td>What school/district conditions have made implementation challenging?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What resources/processes have contributed most to your ability to implement the new standards?</td>
<td>Professional development/ training</td>
<td>PLCs</td>
</tr>
<tr>
<td></td>
<td>What school/district conditions have helped with implementation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey 2</td>
<td>At this point in the school-year, what do you see as the biggest challenges to fully implementing Common Core standards?</td>
<td>Time (lack of) Pacing</td>
<td>Resources are both helpful and challenging</td>
</tr>
<tr>
<td>10/24-11/14</td>
<td>What resources/processes are contributing most to your ability to implement the new standards?</td>
<td>Curriculum Guides</td>
<td>PLCs</td>
</tr>
<tr>
<td></td>
<td>What school/district conditions make implementation challenging for you?</td>
<td>GCS Team</td>
<td>Time (lack of) Pacing</td>
</tr>
</tbody>
</table>
Developments over time. Over the course of the study, CCSS implementation advanced at each school and teachers’ perspectives changed with the advancement. Comparative analysis between the incremental surveys, among the two focus group meetings and the first and second round interviews all reflect these developments for each faculty. The surveys, in particular, captured trends in teacher perceptions. The optional comments that some teachers chose to include with their survey ratings were particularly telling.

The remarks from Sayer on the second survey in October were notably positive, with one teacher commenting, "We are implementing the common core thoroughly and with fidelity." Another respondent described teachers’ efforts: "Doing the best we can with the resources we have." A third teacher added, "We are all on board." By the final survey in December, the comments remained positive, but were balanced with a clear recognition of the challenges they faced. One respondent observed, “We are not where we want to be in the process, but we are a long way from where we started from at the beginning of the school year.” Another teacher remarked, “I think that we are headed in the right direction but it will take extra time and energy to fully implement all of the new standards.” Confirming the overall ratings of respondents on their mid-year implementation, a third teacher exclaimed simply that, “We are moving forward in the process!”

The additional comments from Demery teachers reflect a similar progression. October survey remarks included one teacher explaining that, "since this is a new program, we just need to work out the kinks of how to implement it before it becomes really functional." Another teacher added, "Now it is just getting to know the content of the
standards and finding my comfort level. I am really enjoying the challenge." Two others connected to overall school and district conditions: "Our county has set a high expectation for us, which is great, but it can be stressful. We'll make it!" and, "I feel that our school is at a place that is good not only for our students but our teachers too. It is overwhelming and stressful but at the same time it keeps us current and our brains charged!"

As with teachers at Sayer, the comments by Demery teachers on the final survey were positive but realistic. One respondent put it plainly: “It's not an option... we are going to continue moving forward.” Another anonymous teacher reflected the overall response of her peers to question four, 95% of whom rating their feelings as somewhat comfortable: “At this point, I feel so much better about the common core. We have passed through that "uncomfortable spot" when something is new.”

Responses to the likert scale items in the surveys also reflected positive directions in implementation with a growing realization of challenges. Table 4.4 shows the changes in teachers’ perceptions, as reflected in their ratings of implementation and comfort levels across the three surveys. The trend in these ratings seems to show that, at both schools, as implementation levels advanced, comfort levels first increased and then began to plateau.
Table 4.4. Implementation and comfort levels across the three faculty surveys

<table>
<thead>
<tr>
<th>Question [Appendix B]</th>
<th>Survey 1</th>
<th>Survey 2</th>
<th>Survey 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sayer</td>
<td>Demery</td>
<td>Sayer</td>
</tr>
<tr>
<td>Level of implementation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully</td>
<td>37%</td>
<td>56%</td>
<td>57%</td>
</tr>
<tr>
<td>Partially</td>
<td>21%</td>
<td>22%</td>
<td>33%</td>
</tr>
<tr>
<td>Developing</td>
<td>25%</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Beginning</td>
<td>17%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Comfort Levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Comfortable</td>
<td>8%</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>50%</td>
<td>69%</td>
<td>67%</td>
</tr>
<tr>
<td>Somewhat Uncomfortable</td>
<td>34%</td>
<td>16%</td>
<td>19%</td>
</tr>
<tr>
<td>Not at all Comfortable</td>
<td>8%</td>
<td>3%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Research Questions. As stated previously, three key questions framed this study:

1. How do schools respond to large-scale policy change?
2. How do teachers experience the shift to adopt Common Core State Standards?
3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?

Though the survey, interview and focus group protocols were specifically designed to illicit responses according to these three questions, their primarily open-ended nature allowed for varied answers that could not be anticipated or categorized in advance. As I collected and analyzed the data, I noted recurrent themes and began to generate a list of codes. I kept track of these themes by noting the frequency of the codes and arranging them in a spreadsheet based on the different data sources. Once all of the collected data was compiled, the codes were grouped according to which of the three research questions they were most associated. Table 4.5 provides a summary of findings as related to the three questions framing the study. The following sections detail how the data and codes aligned to answer each of the research questions framing this study.
Table 4.5. Summary of findings in answer to research questions 1-3

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Summary of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How do schools respond to large-scale policy change?</td>
<td>They respond by interpreting and making sense of the policy, framing the scale of the change and recognizing its potential benefits.</td>
</tr>
<tr>
<td></td>
<td>They collaborate with colleagues to both interpret and implement.</td>
</tr>
<tr>
<td>2. How do teachers experience the shift to adopt Common Core State Standards?</td>
<td>They experience the impacts personally, professionally, for their students and for education in general.</td>
</tr>
<tr>
<td></td>
<td>They reconcile the fact that they are learning while doing.</td>
</tr>
<tr>
<td></td>
<td>Compromises and feelings of duplicating effort affect their self-image as educators.</td>
</tr>
<tr>
<td>3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?</td>
<td>Time and pacing determine levels and quality of implementation.</td>
</tr>
<tr>
<td></td>
<td>Communication is key and uncertainty affects the confidence with which educators move forward.</td>
</tr>
<tr>
<td></td>
<td>Training and resources are critical but vary in their usefulness and may not be targeted to be most effective.</td>
</tr>
<tr>
<td></td>
<td>Competing initiatives can impede the process and affect the way the policy itself is received and perceived.</td>
</tr>
</tbody>
</table>

Research Question 1. How do schools respond to large-scale policy change? School-level responses to Common Core State Standards were revealed in this study by participants at each level and also, to a certain degree, by the documents examined. In the initial phase of adopting the change, teachers, principals and county coordinators began to interpret the policy, frame what it meant to implement, and collaboratively act to put the new standards into practice. Interpreting involved defining Common Core as representing deeper, more rigorous standards and perceiving the potential benefits of the change for students and schools. Implementation was overwhelmingly characterized by participants as a collaborative effort that was unfolding gradually as educators at each level made sense of the policy.

Evidence of the school-level response to Common Core appeared in the information collected from multiple data sources. Recurrent themes were coded within the data from each
source, across the various types of sources and grouped accordingly. Table 4.6 outlines the codes that emerged and their occurrence by data source.

Table 4.6. Question 1 codes – Occurrence by data source

<table>
<thead>
<tr>
<th>Codes</th>
<th>Principals</th>
<th>District Coordinators</th>
<th>Teacher Surveys</th>
<th>Focus Groups</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpreting the policy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Framing the change</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Deeper/More Rigorous Standards</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Perceived Benefits</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Implementing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

**Interpreting and framing the change.** Educators at the district, school and classroom levels all described the process of interpreting the policy and defining the change. Among educators at Demery, and at the county level for Scarboro Public Schools, the shift was variously viewed as both simplistic and monumental. For Lance Harner, the Scarboro RttT Coordinator, the change was not unlike his past experiences with transitioning to different standards. He characterized the policy change in this way:

Common Core, that simple term, is just like saying, “This is the standard course of study.” That’s not real hard to teach. It’s not real hard to say, “Here’s your standards.” When I moved from SC to NC I didn’t go through a whole year of “here’s your standard course of study.” It was, “here’s your standard course of study and teach.” Maybe that’s not the best way to go about it, but the point is, that it’s just the list of objectives.
On the other hand, for principal Alison Blanford, the new standards represented a significant change: “Everything that we’ve been prepared for says that this is groundbreaking, that this is going to change the face of education.” During the second interview, she added:

I’m not trying to make it easy, because it is a shift. Um, kind of saying this is how it was before, this is the direction you need to take it in. Rather than taking the approach that oh, it’s just very easy, you know it’s just gonna require some minor tweaks, because it’s not.

Mr. Harner did acknowledge the complexities involved in making the shift. When asked about the potential challenges, he noted that:

The biggest challenge is interpreting what that means in terms of teacher actions. You hear a lot of people say “oh, you’re going to have to change the way you teach, you have to change the way you do things.” Well, that’s great to stand up and say, “Well, change the way you teach, change the way you do things,” but we need to define exactly what that means in the classroom and we actually have to help teachers understand exactly what kinds of things does that mean and how that impacts practice.

During the second interview, Clinton Tokar, Scarboro’s Assistant Superintendent for Curriculum and Instruction (C&I) joined the discussion and added his perspective on the
We really focused on the analogy that we didn’t just change the target. I mean here’s the old target and the new target and you use the same gun and just shoot with the same gun. That it now requires a new approach and we won’t be able to hit the new target with the same approach.

The challenging element of newness at the heart of the change to Common Core standards was acknowledged by teachers as well. One Demery teacher noted on the first survey that, "It's new and of course it will be a challenge."

For educators at Sayer Elementary, the interpretation was somewhat different. Garrel County RttT Coordinator, Neil Goods, characterized the change this way: “It’s such a massive change in thought and all of that. What we’re doing is having to change people’s beliefs and that’s a really hard thing to do.” Sayer principal, Carlene Yeadon, seemed to agree with this view, describing the change as, “definitely a paradigm shift.” However, teacher responses on the first survey indicated that the shift to new standards was not yet causing too much anxiety or excitement at the classroom level. One teacher expressed, "We are still teaching basically the same thing. Objectives have been added and deleted, but the principles of teaching are the same." Responses on the second survey, just over a month later, suggested that this feeling persisted, with one teacher noting, "I'm learning it's not that different - just worded differently." This incongruence between interpretation at the district, administrative and classroom levels could have been due to an incomplete understanding on the part of teachers. Second grade teacher, Loraine Vancleve, explained during the first Sayer
focus group meeting, “I feel like I know the standards, but what they actually mean and delve into them and the whole theory is blurry.”

Though there were differences in the overall framing of the change, educators in both districts interpreted the new standards as representing higher expectations for students, in terms of depth of thinking and rigor of learning. The message that the Common Core standards were intended to be “fewer, higher, deeper” had resonated from the national and state levels and was communicated at the district level through documents such as Scarboro’s Curriculum and Instruction parent brochures. In their September 2012 edition, they used language provided by NC Department of Public Instruction to summarize:

The new standards have similar goals because they are aimed at improving classroom instruction and student outcomes through:

- A focus on fewer, clearer, higher standards
- A content-centered application of knowledge using higher order thinking skills
- Alignment with college and career expectations, nationally and internationally, so that students will be prepared for post-secondary education and work.

This message appears to have been successfully transmitted to Scarboro teachers, as evidenced by the responses of teachers at Demery. During the first Demery focus group meeting, third grade teacher Dana Schug, noted, “Math in Common Core seems to be more investigative and very high level and multi-leveled steps.” She went on to add, “I do think it’s much better than what we had, in many ways much more clear cut and very high level thinking and the kids are going to be in a much different place.” Kindergarten teacher, Fay
Blume, added, “A lot deeper thinking so that’s been a shift in our thinking.” Lizzie Weiland, fourth grade teacher, gave a specific example from her experience, “It’s just a change more of how kids are learning. It’s much more hands on. Teaching them five different ways they can subtract numbers rather than, “this is the algorithm you use for subtraction”. So, it’s definitely a shift in the way kids learn.” Lance Harner recognized this interpretation as encouraging:

All the conversations I’ve had, there’s one major realization and that is that it is more rigorous and that comes out every… everybody that I’ve talked to. So even if they haven’t mastered what it looks like yet or how to go about achieving it, everybody sees that as a common element of the Common Core and they’re talking about ways to do that at their schools and strategies for teachers to become more successful in increasing the rigor and ultimately the learning and that to me is a very positive aspect.

At Sayer, Carlene Yeadon also acknowledged the increased rigor in the Common Core:

Of course there are similarities in math and ELA to the old Standard Course of Study, but um, still it’s a whole lot for them [teachers] to dissect and just take in and be able to teach and teach at a high level of rigor that our kids need.

Survey responses from Sayer teachers also showed this recognition of greater depth and rigor. One teacher, in identifying the potential benefits of Common Core, noted, “the focus it provides as we teach deeper meaning of concepts.”
Perceptions of potential benefits proved to be a prominent feature in the ways educators interpreted the move to Common Core. There was significant agreement among teachers in both districts that the primary benefits related to the consistency created by implementing the same standards in 46 states. Figure 4.2 displays word frequency analysis of responses to this question on the first survey: *What do you see as the possible advantages of Common Core standards?*

*Figure 4.2. Wordle analysis - Potential advantages of Common Core*

Several Demery faculty members commented on consistency as a benefit:

"The whole country could finally be on the same page."

"I think it is important that every child, everywhere, is being taught the same thing."

"To me it seems logical and something that will help our state, and country as a whole."
At Sayer, the responses were similarly aligned:

"The advantage is clear - 46 states all teaching the same thing means that when students move, they are at least on the same page as everyone else."

"All schools across the nation using the standards will make it easier to compare data with other states."

During the first Sayer focus group meeting, second grade teacher, Loraine Vancleve, added, “If we’re preparing students as a nation to be ready, take over and lead our nation, we need to be on the same page.”

School and district administrators were in agreement with teachers that consistency is a significant potential benefit presented in the move to Common Core. Clinton Tokar, Scarboro’s C&I director, explained:

We’re trying to make the argument that it’s not ok for students to have widely varied experiences in their education. The quality even, um, choosing what to cover… so in the past, literally in the same school different classrooms, one teacher chooses to teach this another choose to teach that so content has varied widely.

Demery principal, Alison Blanford, agreed, saying, “I’m a big believer in alignment so the more closely you can have things aligned I think the better it is for children.” Alison went on to share how she felt Common Core would be beneficial in general:

I really like the curricular direction. I really do. I think that it is, while it’s sometimes difficult for teachers, I think it’s really benefiting students from changing the mindset from I have to cover all this and really focusing on the teaching of not only curricular
skills but interpersonal and problem solving skills because I think in the long run that is going to benefit our kids.

Sayer principal, Carlene Yeadon, was equally optimistic:

I think it’s all, you know, it’s a work in progress. It’s a good thing, though. I’m excited and the teachers, when they talk about it they’re excited. So, even in spite of being overwhelmed, they’re excited about the change, they think the kids will really benefit from the Common Core.

Additional survey responses from Sayer and Demery teachers echoed this, one teacher expressing on the first survey, “I also think it is definitely what is best for the kids in this ever changing world.” Another Demery teacher indicated a similarly positive outlook on the third survey, “I believe in the common core standards and think they will be very beneficial to the students.” Demery first grade teacher, Lacey McKenny, connected the potential benefits to what she was already seeing with her students:

I think if we put the hard work in now, that in 5 years it’s going to pay off. I can already see my kids thinking differently. Just in the short amount of time we’ve been doing it, at this point in the year, they’re just thinking so much differently, it’s amazing. So, I think it’s what’s best for our country. It’s what’s best for our kids.

One Sayer teacher’s comment on the third survey summarized the overall positive outlook, saying simply, “Common Core is a great concept, and overall I think it is moving education in the right direction.”
Collaboration with colleagues. The role of collaboration among colleagues was prominent and many study participants in both districts spoke about the role of Professional Learning Communities (PLCs), or collaborative teams, in interpreting and implementing the new standards. Lance Harner pointed to PLCs as an integral part of the process in Scarboro County, “PLCs is really a cornerstone of the way this has worked. So, it provides teachers an opportunity to work with other teachers in the same subject, you know, and the power of it is that they’re developing aligned common assessments.” He went on to add, “after they do analysis they’re having wonderful conversations around what is it we’re going to do to help the kids achieve and having conversations about what do we do differently.”

In describing the role of PLCs specifically for the Demery faculty, Alison Blanford explained:

I think it provides them with that job-embedded professional development that they need and then you’re not, you’re looking at the curriculum not just in terms of instructional delivery but tailored instructional delivery based on the needs and demographics of your students that whole PLC process is really providing them with that time to have those discussions and you know let them have the time to plan and say what does this look like.

The views from the district and administrative levels in Sayer were similar. Neil Goods spoke to the role PLCs were playing in their implementation, “I think just getting them [teachers] in PLCs talking, looking at the standards and unpacking together has been by far the most helpful.” When asked about processes that had been helpful, principal Carlene
Yeadon also pointed to PLCs, saying, “I think so far what’s been helpful is the use of the PLCs to have the time to talk to each other.”

Teachers agreed that PLCs were a key element in their implementation process. On the first survey, several Sayer teachers noted this, with one teacher commenting, "Our PLC’s and training are what has given me the understanding and abilities I have to date to implement the standards." Another teacher pointed more generally to the collaborative aspect of her process, "I am constantly communicating with colleagues to discuss any areas that I don't understand." A third teacher connected this to the very nature of the change itself, saying, "It's a new "playing field" for teachers. All teachers are learning them together and therefore has to work together to achieve the common goal. It embraces networking and a "coming together"; we are all on the same team."

Teachers in the Demery focus group echoed much of the same. Kindergarten teacher, Fay Blume described it as a way to lean on one another’s strengths: “I think for us, our PLC is crucial. We each have our strengths, like some team members are strong in math and some in reading and I feel like we play to our strengths.” Lizzie Weiland concurred, “I agree, collaboration with this is huge. I don’t think that I could do this all on my own.”

Sayer focus group members, on the other hand, recognized the importance of collaboration in implementation, but pointed out significant barriers to achieving this in their PLCs. Loraine Vancleve observed of her PLC team, “We’re very close knit and figuring it
out together,” but then quickly added:

The position our school is in, though, our PLC is more focused right now on data instead of dissecting the standards. So, our time together in PLCs is very limited in what we can do because we have to meet once a week after school and our PLCs to discuss data and then once a week during the day in PLCs to discuss data. I think it would be a great use of PLC to have that time to do that and to really dissect it.

There’s just really no time to do that.

Her fellow focus group members agreed that they did not feel they could use their collaborative “PLC time” to work on interpreting or implementing Common Core. Fifth grade teacher, Shanna Wiens added, “I think PLCs could be nice if we could use that time to actually collaborate.” When we revisited the subject during the second focus group meeting in December, I asked the group, “Are you able to use that PLC time to do any of this?” Shanna Wiens and Dona Disalvo both responded, “No.” Loraine Vancleve added, “No, that has to be completely data.”

Thus, even though there was agreement in both districts that collaboration and PLCs were critical in the implementation process, not all of the teachers included in the study were able to see this realized. For Sayer teachers, structures that required them to use “PLC time” to accomplish other tasks, such as analyzing student data, appeared to preclude them from approaching implementation as collaboratively as they would have liked.

*Implementing*. As with many new policies, schools were expected to respond to Common Core by putting the new standards into action and implementing according to
mandates from the state level. As noted previously, one of the two districts included in this study – Scarboro County Schools – chose to expedite the process and implement the standards for K-2 teachers one year early. This is reflected in teacher responses to the first survey, with 56% of Demery respondents reporting that they were fully implementing, as opposed to only 37% of Sayer teachers during the same time period. The varying levels of implementation, as reported by teachers across the three surveys, were summarized in the previous section in Table 4.4, which also shows that the variation between the two schools continued throughout the study period.

Though the survey responses showed substantial differences in implementation levels, discussions during interviews and focus groups painted a more complex picture. In terms of actual classroom implementation of the new standards, as in using them to guide instructional planning and delivery, first semester implementation was characterized by teachers and administrators in both districts as initial, active and on-going.

As noted earlier, at the beginning of the year, Lance Harner described implementation levels across Scarboro schools as being only in the very initial phases. Even a few months later, Clinton Tokar still described Scarboro as being only at the beginning, offering, “On a scale of one to ten I’d say we’re at two. We know that there are standards. We’ve looked at the standards. We’re developing the curriculum documents that align to the standards, but that’s at varying levels.” At the school level, Alison Blanford seemed to agree even as she
pointed to the work that had been done in the previous school-year:

I think we’re in that developing stage of classroom implementation and what I’m seeing is it’s kind of, it’s that gray area. I think that you know they’re kind of finding their way. Of course it’s more comfortable for K-2 teachers because they implemented last year. I think it’s 3-5 that are really struggling. They’re back where my K-2 teachers were last year, they’re struggling with it this year.

Also recognizing the significance of starting early, Mr. Harner did later add:

This is not our first year, which in and of itself things are kind of beginning to sink in, and yes there are changes but we’re beginning to understand a little more thoroughly exactly what it’s going to look like. Even though it’s being tweaked and so forth, it’s more defined. And that in and of itself, reduces the anxiety.

For the faculty at Sayer, recognition that they were just initiating the process was paired with optimistic confidence on the part of principal, Carlene Yeadon:

We’re fully implementing. We’re using the instructional guides that were created this summer. The curriculum resource for each grade. So, yeah, they’re fully implementing. Still figuring out as they go, so yeah, coming up with a lot themselves, but definitely a paradigm shift. I’m really impressed with the teachers doing it as far as what the Common core wants them to do.

By December, Sayer teachers participating in the focus group reported that they were implementing and beginning to feel positively about the change. Loraine Vancleve spoke of
her experiences in second grade:

I still feel like I’m muddling through it. I had some moments this week where I actually saw the math, whereas before it seems crazy, now I’m seeing my kids grow with it. But, it’s still exactly, it’s still a lot of questions left, but I’m in the middle of it.

Fourth grade teacher, Sofia Munden, noted a desire to implement in the right way, declaring, “I’m implementing it and trying my best to implement it and a correct way, as correct as I can. My whole grade level is at this point with it. We’re in the middle of it. Shanna Wiens added, “We’re finding our way in 5th grade. We’re just starting to have our heads above the water.”

**Research Question 2. How do teachers experience the shift to adopt Common Core State Standards?** Teacher experiences with initial implementation of Common Core were illuminated in this study primarily through responses to the teacher surveys and focus group discussions. Their perceptions of these experiences centered around impacts the policy change was having on them, personally and professionally, on their students and on the broader educational and societal landscape. Teachers described specific impacts to their self-image as educators, noting the compromises they made, the frustrations of learning while doing, and feelings that they were duplicating effort.

Teacher perceptions and experiences were revealed in the data collected from surveys, interviews, focus group discussions and documents. Constant comparison of data from each source and collection phase revealed recurrent themes, which were noted for each
source and coded accordingly. Table 4.7 outlines the codes that emerged and their occurrence by data source.

_Table 4.7. Question 2 codes - Occurrence by data source_

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<th>Codes</th>
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<td></td>
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</table>

*Impact on personal lives.* Survey responses and focus group discussions frequently centered around the ways Common Core was impacting teachers personally. At Demery, first grade teacher, Lacey McKenny observed, “Everyone in the county is working so hard and it’s cutting into our personal lives.” One Demery teacher’s comment summarized several other similar survey responses: "There is only so much time in a day, and I have been working 10-11 hour days, then taking it home for nights and weekends!" During the second Demery focus group meeting, Dena Schug expanded upon the impact, “And, before you know it, you’re backed up on grades. Some teachers have small children. How do you do it and carry a family? Do we believe in it? Yeah, but are we worn out? Yeah.”

At the district level, the personal impact on Scarboro teachers was of primary concern
to C & I Director, Clinton Tokar, who expressed his perspective with the following example:

I mean I don’t… policy makers cannot appreciate the sweat and tears that teachers are going through right now. If they’re going to do it well, I mean hours of researching and culling resources from the web internet, from you know their old materials to align to these new standards. It’s unbelievable. We asked our folks to do a simulation where we asked principals to prepare a simple math lesson aligned to the new standards. It took them an hour and 15 minutes. And we said “Now, your teachers, elementary, have to do this for four subjects and they get two and a half hours a week of planning.” And then we take that planning to do PLCs, for teams, and to talk about data. I mean if I was a teacher I mean I would… to do it well, takes time and for us not to have the money to give them resources, it is really heartbreaking, really. It really bothers me a lot, you know.

For Sayer teachers, the issue of personal impacts came out several times and the structured focus group conversations became emotionally charged. Shanna Wiens illustrated by saying:

Well I am single and I have no kids and my time is consumed, so I can only imagine how moms feel, wives feel. Some nights I leave here with the janitors and it’s not that I’m doing above and beyond. I’m just planning my part of the lesson for my team. So, the timing, I’m doing more this year than I did my first year of teaching when I was learning the NCSCOS so I feel like my time, your personal time, is just getting swept away.
Loraine Vancleve picked up this thread from the her perspective as a working mother:

Time-wise, a ton of time, and it’s really affecting my, I mean my family. I have 2 young children and a husband who works nights. I mean, my poor house, don’t come see me because it’s not clean. I don’t have time to clean it. It’s either that or not teach. (She later continued) I have a hard time doing it halfway, but I can’t give my all right now. Nowhere am I being good. I’m not a good wife (crying). I’m not a good mother. (Disalvo takes her hand.) I just can’t (inaudible)…

As Loraine began to break down, Dona Disalvo added from her unique perspective:

I don’t know if I can say this without crying (starts to cry) I truly thought I could find…. (stops) But, as a parent, and I’m a breast cancer survivor (starts to tear up again), I adopted my son and I can’t (stops) spend the time and it’s not fair to him (cries). I’m sorry. I waited 12 years to have a baby. I have one now and I can’t spend time with him (crying).

By the second focus group meeting in December, Sayer teachers were noting the compromises they had made to reconcile the situation. Dona Disalvo remarked, “I’ve just decided that I spend all the time I want to with my son and I go to bed with him early and I get up at 4:30 and I do it then. And that’s rough on me but it solves the problem. And it kills me to get up but that’s what I’ll do because that’s what he needs and I do what I have to do.” Loraine’s comments on the subject were in a similar vein: “I stay here until about 4:45 every day because I have to get him (my son) and then I spend the rest of that time with my kids and then once they go to bed, I stay up and create everything. And I’m just tired, very tired.”
Shanna Wiens’ compromises were more on the professional end: “I just stay late and I cut off when I’m done, like at four or five when I leave, that’s it. And if it’s not done it’s not going to get done. And, so I have stacks of papers? Yes. But I’ll get to it when I get to it.”

*Impact on professional identity.* Teachers also noted how the policy change was affecting them professionally. Many in both districts likened the process to being a first-year teacher, completely new to the profession. On the first survey, one Demery teacher put it this way: "Lots of new stuff; I feel like a first year teacher. (I have been teaching for 20 years.)" Others went into detail as to why many teachers were feeling this way, one respondent explaining, "Teachers having to change how they always taught. To really teach these new standards well, you have to teach them differently and that is hard for teachers." Another teacher added, "I think it’s a shift in mindset for a lot of teachers. It will force a lot of people to change the way they are teaching our students." Dena Schug, a third grade teacher for seven years, admitted the change in her self-image as a professional, “I still think of myself as a novice with implementing Common Core.” Carlene Yeadon, at Sayer, echoed this for her teachers, saying, “This year is like the beginning year for everybody because of the change. So, for a true beginning teacher, there’s not a whole lot of difference between them and a teacher that’s been here 20 years.”

Many of the participating educators noted that the necessity to learn while doing affected their approach to their jobs and made them feel that they were wasting or duplicating effort. One Demery respondent commented on the first survey, "Leaving our old standards and curriculum behind and having to figure out how to teach the new without the use of
textbooks or feeling like we can use any of our ‘old tricks.’ I feel as though my grade level is having to recreate the wheel!” Another Demery teacher added, "I feel like the school district is flying the plane as it is being built. They are constantly giving us new information but that seems like it keeps changing even within the first week of schools." Lacey McKenny asked, “Where do we draw the line as a county on how much are you expecting all of us to do, if we’re all struggling with the same unit plan? Let’s say we’re all struggling with number sense since that’s a first grade thing I’m currently doing. Then, how much time is wasted? How much time is wasted?”

Lizzie Wieland pointed to the district situation as a whole, “I think at a county level, our county kind of paved the road as it went.” Reinventing the wheel, paving the road while driving and building the plane while flying were among the common metaphors used by several respondents. Alison Blanford echoed what Lizzie had said, observing for Scarboro County, “They’re building the plane while they’re flying and they’re trying to get the wheels on there so they won’t crash, just in case, you know they’re up and down, you know.”

Much of the teachers’ frustration seemed to connect to a general desire to do things the right way. Shanna Wiens said of her fifth grade team at Sayer, “It’s so new, we’re planning each week by each week and you know so we’re not we don’t feel that confident but at the same time we’re doing what we have to do week by week to make sure that every standard is being taught for that week, so..” Loraine Vancleve added, “It’s that pressure of I want to do it right and not just hit exactly what it says but finding out and understanding exactly what does that standard mean and what do my kids really need to know before I
move them on to third grade. ‘Cause I don’t want to just check it off and say I’ve taught it.”

Carlene Yeadon saw this in her teachers, stating with confidence, “There’s not one teacher or one assistant who comes to this building not wanting to do their job or do it to the best of their ability, so I think they were anxious about wanting it to be right.”

The uncertainty and lowered confidence also created concern about how teachers were viewed by parents. As Fay Blume put it:

It makes us look unprofessional when we talked to parents, too. Because parents would say, "Well what do they need to know?" and we’d say "Well we don’t really know yet." So that was kind of embarrassing and I think it took away from our professionalism. That’s really the biggest problem that I have.

Several teachers also noted that the overall frustration level was impacting the way they viewed their careers. In the optional comments on the first survey, one Sayer teacher exclaimed, “I AM DROWNING and so are MANY of the teachers at my school. EVERYONE is overwhelmed and personally I don't really enjoy teaching that much so far this year! It has been a VERY challenging start to the school year and isn't getting much easier.” On the third survey, another Sayer teacher commented, “I think our teachers are working extremely hard and I worry that many of us are getting burned out and may not be around for many more years.” Loraine Vancleve presented herself as an example of this, confessing, “I’m one of those teachers whose resume is sitting on my desk at home and if I find something better I’m gone. And I did my national boards last year. I mean I was planning to teach for 30 years.”
Impact on students. Among the impacts experienced by teachers, of particular concern was the impact on students. Though there was agreement that the standards themselves represented a higher level of rigor and thinking processes needed for students to succeed, many teachers expressed concern that the implementation process was affecting students negatively. Speaking to the aspect of “building the plane while flying it,” Lizzie Weiland noted, “It just seemed like everything was jumbled and thrown together at the last minute, which kind of made me feel like I’m jumbled and thrown together at the last minute and that’s not a good feeling to have especially when it’s kids future and education that is what we’re here for.”

At Sayer, Loraine Vancleve pointed out:

I’ve learned a lot. But I think I’ve learned a lot at the expense of this class. At the expense of these kids. And that’s why I spend so much time on it, because I’m the kind of person that I can’t do it halfway. Even though it’s a learning process. It doesn’t just impact me. It impacts those 24 children in my class. And I want them to be as prepared as they can be.

Her principal, Carlene Yeadon, recognized the potential for teacher burn-out, saying, “I have teachers that stay until 6:30 or 7:00 and I am all the time, “you need to go home” because if they get burned out that’s not good for them or their children.”

Dona Disalvo was concerned that the standards themselves might be too rigorous or
not developmentally appropriate:

We give them more rigor. Well, in kindergarten, and they’re 5, they still need love and….what a lot of them don’t have is confidence and when you kill that and you don’t build that and I’m sorry but we can’t do that. And with all this, like you said, I don’t feel like I have very much room to just help them be…. happy, sometimes and pushing, pushing, pushing. We have to build that confidence and I still do those things but I feel guilty and there has been a time or two when they came in my room and I wasn’t on my schedule. You don’t have that flexibility for those teachable moments or to take the time when a child needs something extra.

Broader implications for education and society. Though many comments and discussions focused on the impacts closer to home, teachers also noted the broader impacts of the policy change. Clinton Tokar admitted that, with the change to Common Core State Standards, the district was, “really asking our teachers to think, step out of their classroom and think from a state and national perspective to really kind of say, “Hey, you are responsible for the work of this country and the work of this state and Scarboro County” and how can we rethink education?”

Many of the overall comments about broader impacts pointed to the potential benefits and positive impacts of creating deeper thinkers and students more prepared for a changing world. However, at Sayer, Loraine Vancleve connected the impacts on broader picture in a different way, saying, “I’m concerned about education because I’m afraid that it’s going to burn out the good teachers. Because the ones that really care are putting in so much time and
it’s taking away from our families and there are so many teachers in this building who have told me, “I’m done.” And that concerns me for our school, for my children, for all of our children.”

**Research Question 3.** How do contextual factors shape organizational learning in schools during the initial implementation of a new policy? Contextual factors that emerged as most shaping teachers’ learning and implementation experiences included time and pacing, communication and the perceived usefulness of training and resources. An additional factor that significantly impacted school-level interpretation and implementation was the concurrence of other district initiatives. The contextual factors that shaped the learning process for the schools included in this study appeared in the data collected from all of the data sources. Recurrent themes were noted for each source and coded accordingly. Table 4.8 outlines the codes that emerged and their occurrence by data source.

*Table 4.8. Question 3 codes - Occurrence by data source*

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Though there was considerable similarity among the contextual factors that impacted learning at both schools, there were also significant differences between the nature of the contexts and the ways these conditions shaped organizational learning among each faculty. For example, nearly every study participant mentioned time and pacing as a factor in implementation, but the aspects of time and pacing and the ways in which they were impacted were notably different between the two schools.

Too fast and too little time. At Sayer, where the pace of implementation followed the state mandated timeline, teachers felt rushed to take on an extensive amount of new learning in a short period of time. Neil Goods described the pace as “flying”, noting, “It’s so fast! If you think about how fast we’re changing, it’s amazing.” One survey respondent remarked on the speed of the changes in this way, "It's just overwhelming too much at one time and not enough resources or training done in advance--not while you're trying to implement!" Pointing to the unique North Carolina context of overhauling all subject areas along with Common Core, Dona Disalvo noted, “I know NC chose to, where a lot of states didn’t, to implement full, all at one time, which is making it harder… I think that is why we’re feeling so pulled and stretched is that we’re doing it all when others are just doing math and reading. NC was trying to go a step ahead but it’s pressured us.” On the second survey, another teacher commented, "Common core would have been much better if implemented incrementally in our district."

As with several other remarks noted previously, many comments about time referenced the amount teachers spent planning as compared to previous years.
Loraine Vancleve made the following comparison:

Last year we would come with all our ideas and plan together in an hour and a half and we’d have our plans for the week. But now, just yesterday, it’s review time in math for some skills, so I’ve exhausted the resources I had in the room, stayed here until 5:30 last night, went home, spent a little bit of time with my family. Really, just saw them, got things done, bathed the kids, put ‘em to bed, my husband went to bed and I stayed up two more hours creating and I’m not finished… and I’m just doing math!

Both faculties agreed in their comments on the second survey, one teacher observing, "It's extremely time-consuming. Planning is taking triple the time as it had in the past."

Another added, "It is taking my almost every waking moment to implement to plan and meet the demands” When asked in December about the greatest teacher needs, Carlene Yeadon responded, “I think just more time for them to collaborate is huge and I think just time in general for everything to gel.”

At Demery, where K-2 teachers had a year head-start with new standards, time and pacing were still among the biggest issues. RttT Coordinator, Lance Harner noted, “If you could just get the wheel to stop turning for a little bit to define what that looks like in teacher practice, I still see that as just a huge hurdle.” Demery principal, Carlene Yeadon expressed a desire to have started her entire faculty early, saying, “I wish that it had been a transition year K-5 so I didn’t have that sense of two groups of teachers working on two different things in my building.”
At least some of Demery’s teachers expressed more comfort than their colleagues at Sayer with the pace taken on by their district. On the first survey, one teacher remarked, "I just think that our state/county’s push to implement now with time to grow is an awesome opportunity to be a step ahead of the game." Another Demery teacher, on the second survey, maintained this positive outlook, "Our district is being very helpful with planning time, accepting feedback from us and allowing us to pace ourselves. I feel very confident with our county and our administration." C&I director Clinton Tokar also put a positive spin on the rapid pace, saying, “I wouldn’t change the pace. It’s good to rip things off like a band-aid. I mean if you wait too long, it never really takes hold. To do it in a big storm is not a bad thing. Create the anxiety, stir it up.”

Despite an overall positive view of the Scarboro decision to start early and continue rapidly, there were some concerns. In December, as focus group members reflected on the first few months of the school year, Lizzie Weiland expressed what many of her colleagues were feeling: “There is just not enough time, I feel, to do this how it should be done. I really wish we had more time.” Dena Schug agreed: “There is no time, that’s the honest truth. You’re just wearing yourself to a frazzle trying to stay ahead of the pace.” Lizzie Wieland expanded on this, pointing out, “I think that we certainly do not have enough time to plan as in depth as we should be planning. There comes a time when you just can’t spend any more time at school.”

Concerns about how the rapid pace was impacting implementation was balanced with a recognition that it was an investment in something larger. Second grade teacher, Keri Arp,
verbalized:

We’re spending a huge amount of time, personally and collectively we’re spending on Common core. Do I think it’s going to pay off? Absolutely it’s going to pay off in the long run. We have to, I think education in general we have to invest the time into something and stick with it. If you’ve been in education long enough, the pendulum, it comes and it goes and it comes and it goes. To really invest that time now on something and put all our eggs in that basket to see if it works to see if we can see some changes with test scores and see some changes across the nation. So, I think that time is necessary. Where do we find the time? I don’t know.

Some teachers took a longer term view, such as Fay Blume, who articulated:

My thought was that it’s taking a lot of time now but once we get it down, we’ll be fine and we’ll be a well-oiled machine and we’ll add things to it. When you learn anything new it takes more time than it does later on.

*Poor communication and uncertainty.* Teachers and administrators in both districts noted the ways communication – and lack thereof – impacted their ability to effectively implement Common Core. Several Demery teachers pointed to this issue on the first survey: "The information for assessment pieces, framework, and report cards are not given to us in a timely manner." "They have been very slow to release information. We tend to get things after the fact" and, in reference to challenges, "Not being able to answer specific questions in a timely fashion."
During the first focus group meeting, Fay Blume voiced her feelings about communication, “Our biggest frustration with implementation hasn’t been understanding Common core, it’s been communication between what the county’s expectations are and what we’re supposed to do.” At the district level, Clinton Tokar acknowledged the issues, but pointed out that they did not originate with his team:

What’s been challenging, in particular, is that the vision hasn’t been as crystal clear as some other things can be, and so it seems to change and that can create some frustration for folks. And I think we’re changing appropriately based on data based on feedback, based on new knowledge and we need to change so we’re not afraid to change, but the challenge then as the leader is to communicate that change in such a way that teachers see the reason for the change instead of saying, you know, “Here we go again, last week we were doing this and this week we’re doing that.” And, quite frankly, part of that is from the state level, so I can’t tell you how many times we’ve said something based on what we know and it has changed.

Lance Harner agreed and added:

I think the state is listening and responding to feedback which is good. We’re finding that to communicate throughout the organization can be somewhat of a challenge so we’re trying to use some technology to help us do that, voice over powerpoints, that kind of stuff so we can shoot it out to teachers so they hear the same thing from the same person.
In December, teachers in the Demery focus group were still uncertain of expectations. Lizzie Weiland expressed her desire for more clarity:

I do wish we had a little bit more direction from the county level of where we need to go, what we should be doing because we’re kind of feeling our way around. Yes, it looks good in our classroom. Is it really what Common Core is? Am I doing this right? That’s the question I’m always thinking – is this the right way to do Common Core? Am I teaching this the right way?

Fay Blume recognized that the ambiguity did offer some creative freedom for teachers, but also wanted more direction:

I like the freedom that we’re given, but sometimes I think it’s a little too much freedom and we need more guidance. But I do think the professional freedom we do get from the county that they’re not dictating what we have to do, but I think there’s two sides to that. I think that a little guidance would be helpful too.

On the third survey, one teacher put it simply, “The biggest challenges right now are knowing if what I am doing is the "right" thing. I want to do what is best for kids.”

Neil Goods echoed the same for Garrel teachers, exclaiming, “The teachers by and large want to do it right, they’re just not sure how.” Like Scarboro district administrators, he also pointed up to the state level Department of Public Instruction (DPI) as the source of confusion:

I wish I had all the answers but I feel like I don’t know a lot and then DPI doesn’t know a lot (laughs) and we all just exist and don’t know a lot (laughs). We had to
build a lot of trust because we’d give an answer and they’d call their friend at DPI and get an answer and what they didn’t realize is that we were getting three answers from DPI so that’s when we’d refuse to give an answer. We’d just say we haven’t gotten a straight answer yet. Well they’re calling someone at DPI to get an answer, their friend’s calling someone else and getting another answer and what we were trying to do was shield them from all of that and say until we get a clear answer, because things change so much. So, that was a big frustration for them and for us and there’s still some of that going on. I think at DPI, it’s their… they’re doing the best they can and they’re understaffed just like everyone else is and they have to do these things that other people told them to do. But, just trying to protect them. There are some things you don’t know and it’s ok. No one’s made a decision and for you to know all these different things is not going to help.

At the classroom level, Sayer teachers were feeling the impacts of these communication issues. Loraine Vancleve echoed Neil’s comments and summarized the feelings of her colleagues, admitting, “I feel like we’re doing something. I don’t know that we’re doing exactly what Common Core is supposed to look like, but none of us know what Common Core is supposed to look like.

Usefulness of training and resources. The quality and availability of training and resources were significant factors in the learning and implementation for both faculties. The resources provided to Sayer teachers were seen as both helpful and challenging. Comments ranged from describing a lack of resources to the sense of being overwhelmed by too many
resources. For example, one teacher noted on the first survey, "There are so many resources, where do we begin, what should we use?" whereas focus group Sofia Munden lamented, “We just don’t have enough resources and the resources that we do have, um, they’re not fully accurate.”

The most often mentioned resources, in terms of helpfulness in Sayer’s implementation, were the district level curriculum guides that had been created by teams of teachers during the summer of 2012. Principal Carlene Yeadon described them in this way, “They are living documents that will be changed, could possibly be changed throughout the year as needed, but certainly having gone by that for the year, they will be revisited and reworked this coming summer.” Dona Disalvo participated in the team that worked on the kindergarten guides and depicted the process as being very rushed:

There was a small group of us, maybe 4 teachers and an instructional coach, that tried to lay out – we were only given – by the time we were trained, I think we had 2 days to plot the whole year’s course. So, even as I look, I worked on that team, even as we’re going through planning week-by-week, I find myself thinking why did we do that? I did that – why did I do that? But we were so rushed and it had to be finished by that Tuesday and we spent an extra hour and a half at the end of that day and we begged for more days to have together and to have access to the document to review it because we knew it wasn’t right, but they said that we’re going to change it.
On the whole, Sayer teachers did find the guides to be helpful, but still described spending a lot of their time searching or creating things on their own. Loraine Vancelve had participated in the second grade curriculum team:

The resource that I helped create, like Dona said, for 2nd grade, we went into it kind of blind. It definitely needs to be revamped, but that’s what I’m using and what I have found the most helpful with math is the unpacking documents, because that is where I know what it means. I have not found a lot of resources to help me teach it. I have had to create a ton of stuff but the unpacking has helped me know what it is that they want us to do. But there’s not much else out there that’s helpful at this point.

Lance Harner was aware of the issues and described what the district was doing to adapt currently available resources and compile online resources he saw as plentiful but of varying quality:

If you just Google Common Core, oh my gosh, everybody’s got a blog and everybody’s got a Pinterest and some of what we’re finding is really good and some is “Oh my gosh, don’t go there!” So, we figure if we can give a set of some really high quality ones, but you know it’s the whole idea that if you give them too much it’s overwhelming so just 20 or 25 but now you pick two and just look at those two. Um, because that’s the one thing we’re hearing a lot is needing more resources and we don’t have money to buy more and the fact of the matter is a lot of resources we have will work they just have to rethink how they use it.
For Demery teachers, resources seemed to be plentiful but uneven in their usefulness, creating a situation similar to that experienced by the Sayer faculty. In response to the first survey, one teacher mentioned, "They give us copies upon copies...but how about giving us actual unit plans so we can actually tell what they are truly looking for!" Another respondent explained that they were, "receiving so many papers... not in an orderly fashion. As a result, we all have different materials and explanations. Uniformity would help." Lizzie Wieland explained in further detail, “We were given some unit plans-ish, lesson plans, but we can, we found no use for them really. They were full of activities, but we couldn’t find what the activities were and they just really didn’t fit with what we did here at Demery.” Lacey McKenny continued, “We plan together and going off what Lizzie said about having the unit plans, we as a first grade team our unit plan that the county group got together and planned was amazing. It was the first unit of math. It was ridiculous how awesome it was. Unfortunately, I think we were the only grade level that had the plans.”

By December, teachers had found specific online resources that they had begun to use extensively. Principal Alison Blanford explained, “We’re finding that in the absence of curriculum documents from our own county, we’re using the Georgia state standards.” Several teachers mentioned using materials from Georgia in their responses to the second and third surveys. Dena Schug said as much for her grade level but also pointed out the shortfalls of this approach, “For 3rd grade, we’re pulling the Georgia math units and we’re expected to teach math workshop but they’re not laid out for math workshop.”
The issue overall seemed to rest in the fact that while the internet makes innumerable resources available, searching and evaluating resources can be a monumental task. Lizzie Weiland’s comments during the second Demery focus group meeting matched Garrel RtT Coordinators’s remarks on the subject nearly word for word:

I also think that the resources, there’s a lot out there but it’s sometimes hard to determine is this really valuable, is this a good resource? Is this just something somebody put together and it looks cute that was on Pinterest? You know, so what is kind of the best resource that it’s out there?

One comment on the third survey also echoed this description: “We pull from anything and everything we can get our hands on that says Common Core. It would be nice to have some resources narrowed down- a Google search can find a ton of things but it is very time consuming trying to find the quality that is needed.”

In terms of training, teachers at both schools felt that it was necessary and somewhat helpful but not matched to their needs. In both districts, training on Common Core State Standards was begun the year prior to implementation and continued during five “capped” or state designated Common Core professional development days. These sessions were mentioned in each of the surveys as providing information and furthering understanding of the standards themselves. One Demery respondent noted, "The mandatory Common Core trainings have really helped us to understand the big picture." However, others saw the helpfulness as limited: "Using Common Core days to talk require us to listen to presentations instead of working with our teams to create lessons and look in depth into the standards.”
Lacey McKenny explained further during the first focus group meeting, “I think the training we’ve had, might not be…. effective is a good word. We’re using a whole day, a whole work day to plan and to I guess dive into the Common Core but we are still, I feel like the training is still surface level of Common Core.” Lizzie Wieland added specific details from the fourth grade perspective:

Yeah, I agree with you about the training. I feel like sometimes the training – I mean I get that everyone wants to get in and out of the training but so it’s like it’s just let’s do this really fast and then you guys can go off and plan and then the plans are kind of rushed too and we just don’t get as much done as if we just had our grade level and one area and say, ok, you plan a unit on this, gave us a lot of time to do it to really look at it in depth. It’s all just very surface level and then we end up, I don’t know if I should say this, but not really being able to use what we were supposed to have done. I think the best professional development that I went to was one where they gave us 3 lesson plans and we did the lesson as if we were the kids and then we took that back and were like ok, so this is what Common core is. That’s a lot different than reading a standard that says you can round numbers to whatever place value. So, I think we definitely need more professional development and more time to apply all of the unpacking that we’ve done because we have unpacked the standards to no end.

When the group came back together in December, Lizzie expressed that little had changed: You know we are very lucky here. We do get our half a day of planning every quarter. That helps immensely. However, it’s very frustrating to have to go to these
workshops and that don’t seem like they have a clear focus or are very repetitive when we could be using that whole day really diving deep into the Common core like we’re asking our students to do and getting a lot of stuff done. Instead we have you know morning training and then you have and hour and by the time you start looking up all the resources your hour is up and you have to go back and share with everyone what you’ve planned.

Given that many districts across North Carolina were provided with staff development resources and outlines from the Department of Public Instruction, it is not surprising that Sayer teachers reflected similarly on training provided to their faculty. On the first survey, one Sayer teacher spoke highly of the training she had received, saying "I enjoyed participating in our school system’s CSI (Curriculum Summer Institute). The guidance, from the presenters, and sharing of ideas and already created materials was extremely helpful! We've tried to encourage one another to "work smarter not harder"."

However, not every teacher felt they had benefited in the same way. One teacher described a situation mentioned by several of her colleagues: "Training last year was offered from 3:30 to 5 pm with no compensation. I was unable to attend those sessions because I have small children I had to get home to." Focus group member, Liza Aasen felt that training was not focused on application, explaining, “We got training but a lot of the training we went to was just the theory and philosophy behind Common Core.” Overall, teachers expressed that they valued and wanted training that included opportunities to apply what they were being told about Common Core and put the pieces together for practical use.
Relation to other initiatives. The two schools included in this study were typical of many public schools in that they were implementing several other state, district and school-level initiatives alongside the adoption of Common Core standards. At Demery, the initiatives mentioned by study participants seemed to dovetail with the new standards and support their implementation. Lizzie Wieland mentioned one such adjacent initiative: “We started implementing Reader’s Workshop. It was mandatory for the whole school last year, which helped us a lot with the reading portion of Common core.” Clinton Tokar noted that, as a district, they had narrowed their focus to a short list of priorities that fit well with the new standards:

> With the practice, the instructional practice side, we’ve really focused on three major things that we’ve trained and supported. One of them is high yield instructional strategies, you know, Marzano’s 9 and you know really, um, going as deep as we can with those, not being on a surface level but continually asking teachers to look at those and balance them and use a variety of those strategies to align the learning target. Focusing on Bloom’s Taxonomy and the level of questioning, that knowledge and student engagement.

Mr. Tokar also described a classroom walkthrough process being incorporated throughout the district:

> So, we have our classroom walkthrough instrument which is aligned to those things I just mentioned and we just completed a quarterly SWOT analysis of those with our principals, so if you were to walk in any school toady and ask the principal what did
your SWOT analysis say of classroom walkthrough data, they would be able to answer and they have posters in their office they’d be able to say here are our strengths, here are our weaknesses, here are our opportunities for improvement and here’s what we’re going to do about it.

It was this walkthrough process that ended up defining the biggest difference between the two schools in terms of other initiatives mentioned in relation to Common Core implementation. Though classroom walkthroughs were mentioned at the district level for both districts, it never came up in conversations with focus group members or in survey responses from Demery. A similar process in Garrel County, on the other hand, was mentioned repeatedly by Sayer teachers as impacting their implementation process.

The first mention of the “GCS Team” that performed classroom walkthroughs came during the first focus group meeting at Sayer. It was second grade teacher Loraine Vancleve who first referenced the team in terms of feeling that she was not able to meet district expectations:

And I panicked today when they walked in and I realized my “I can” statements are from yesterday and I know that my scores, that when they walked in today, brought our school scores down because “I can” and “I will” were up from yesterday and they didn’t match what I taught.
She went on to explain how this related to her experience with Common Core:

If I had Common Core I would be stressed, if I had all this GCS team, I would be stressed. The combination of the two…but I do think it’s the combination of all of it, the Common Core came at a bad time for us at our school.

The GCS team was mentioned by several teachers on the second survey. Figure 4.3 displays Wordle analysis showing that the words GCS and Team were among the most frequently noted challenges noted by Sayer teachers.

Figure 4.3. Wordle analysis – Sayer challenges

The following verbatim comments from the second survey illustrate teachers’ feelings at that point in the semester:

- “The common core isn't too big of a challenge. The GCS team that comes into our classrooms weekly is the challenging part this year.”
• "The support of the GCS team and all the extra meetings and work that has evolved into to justify that I'm capable of doing my job – it has lowered staff morale at a time when we needed to pull together to understand and implement the common core."
• "(I need) the ability to do my job without all the pressure or at least a full time secretary to help me keep caught up on all the extra paper work. It should be noted that the common core is not the issue with extra work."
• "GCS team constantly adding negativity to school environment."
• "GCS team presents challenges on not letting us learn on our own what we should."

During the second round of interviews with Alison and Neil, I asked them about how they viewed the GCS Team and its impact on teachers’ implementation of Common Core. They both acknowledged that the team was a source of stress. Neil Goods explained the situation from his perspective as a member of the team:

We don’t have one vision for what that group is supposed to do and, um, the idea originally behind it when they did the walkthroughs was to look for district patterns to help design professional development. That shifted towards and became much more teacher-focused to giving individual teacher feedback. But giving it to the principals not teachers. But I think that line has gotten blurred. Big time. And that is something we’ve talked about quite a bit. Trying to figure out what is our purpose? What do we
need to use that data for? Because until we agree on that, we don’t even know what
data to collect. So, I can understand their frustrations.

When the focus group came back together in December, talk of the GCS Team
dominated the discussion. Though teachers had received the message, from their principal
and district administrators, that they should feel free to experiment with Common Core and
try new things, the GCS Team seemed to work against this notion. Dona Disalvo explained,
“We don’t feel like we can try something and it doesn’t work well ok, we won’t do that and
rethink. We don’t feel like we can do that.” Loraine Vancleve followed her statement, adding
“…because that trial and error that they said, we don’t have room to make any errors. It’s
more that you’re just watching over your shoulder all the time.” Shanna Wiens described her
apprehension as related to the team:

You just don’t know when they’re going to come through that door. Every time I hear
the door rattle, I’m like “Oh no, they’re coming.” And it’s like she said, you feel like
you can’t do anything but teach all day even though you need to, whatever, you feel
like I have to be in front of the room or have kids around me or be moving all the
time. And that’s why I have so many stacks. I don’t want to stay after, I’m not going
to take it home. It’s too much. But you’re afraid to do anything different. So, yeah we
still have that feeling of “gotcha.”

Sofia Munden expressed skepticism as to the purpose of the team:

I know at the beginning of the year they said the walkthrough data was not going to
be used against you, it’s used to help you. It’s funny because we don’t get feedback
from the walkthrough data but we know what’s being said and written about us. And, they’re called a support team but that’s not what they’re doing. And I think that a lot of good teachers have lost their confidence and feel beat down and are just in defense mode all the time. And having to justify everything you do.

A couple of the teachers pointed back to how the team was impacting implementation of Common Core specifically. Dona Disalvo pointed out the overall impact of the two initiatives being combined at one time:

I think it’s unfortunate that we had Common Core and the GCS team together which has caused so much of our stress. I don’t think Common Core alone would’ve impacted as much of what we’re feeling right now, having that pressure. I feel good about Common Core. Hopefully next year, it’ll be better. We’ll know what the end looks like and where to start and we’ll do it better. But I just think that putting the two together.

Liza Aasen looked at the long term impact, predicting, “Even once the Common core is learned and we understand it, I think the GCS team is going to throw a negative part in the mix.”

On the final survey in December, teachers’ comments revealed continued frustration, echoing much of what had been discussed by the focus group. One teacher put it simply, “The GCS team has really made this transition year even more difficult.”

Section Summary. In brief, the data shows considerable agreement between the two faculties in the ways they responded to the shift to Common Core State Standards. However,
important differences in context – most notably pacing and other district initiatives – had significant impacts on the way teachers experienced and initially implemented the new standards.

**Chapter Summary**

Chapter 4 outlined the collected data and research findings related to the three research questions that framed the study. The final chapter, chapter 5, will focus on interpreting these findings and implications for policy and further study.
CHAPTER 5

Discussion and Conclusions

Introduction

The purpose of this comparative case study was to examine the ways educators in two public elementary schools responded to the policy change to Common Core State Standards. Three central questions framed the study:

1. How do schools respond to large-scale policy change?
2. How do teachers experience the shift to adopt Common Core State Standards?
3. How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?

This research was intended to reveal implications for education policy-makers, school leaders and teachers. This chapter provides a summary of findings from the study, discussion of connections to prior research and the conceptual framework of organizational learning in schools. The chapter concludes with implications for policy and practice and suggestions for further research.

The Problem

The Obama administration’s 2009 Race to the Top (RttT) initiative presented sweeping education reforms in the form of a competitive grant process. These reforms included a move to national student performance criteria called Common Core State Standards. The state of North Carolina applied for and won a Race to the Top grant, agreeing to the terms of the award, including the adoption of new national standards. However, as
with many educational reform policies, the actual implementation falls upon the educators at the school level. In the past, changes to curriculum policy in North Carolina had been funneled from state-level origin, through the school district administration, to building-level administrators, and then to teachers. The federally driven transition to Common Core standards added a significant new level to this dynamic, the complexity of which is illustrated in Figure 5.1.

*Figure 5.1. Funneling of Common Core State Standards policy*
Common Core State Standards are the first curriculum reform of their kind to emanate from the national level, be filtered through state and district levels and ultimately enacted by individual educators at each school. As a recipient of the Obama administration’s Race to the Top grant, North Carolina’s Department of Public Instruction (NCDPI) prepared a state level implementation plan that included all schools adopting the new Common Core State Standards for grades K-12. The state level plan included comprehensive timelines, processes and responsibilities for implementation beginning in the 2012-2013 school year. Each of North Carolina’s 115 Local Education Agencies (LEAs) was also required to articulate its own Race to the Top plan with specific details matched to local contexts. Within each LEA, district administrators were left to facilitate the details of implementation, which were then interpreted and enacted at each school. While this is not a completely linear process, it is primarily a top-down effort that starts in Washington and ends in the classroom.

The shifts required to implement these new standards represented a significant learning need for educators at all levels of the system, but especially for classroom teachers. School reform efforts, in general, are complex and the reasons for their success or failure are not often clear. School reform research shows that even the most widely supported efforts have historically yielded mixed outcomes.

Much of the school reform literature points to the importance of context as a key factor for successful implementation. Implementation of curriculum and standards reform ultimately rests upon the contexts surrounding teacher learning and classroom use. This study sought to not only identify the contextual factors that determine how teachers implement
policy, but also understand how they perceive these factors and their role in reform efforts. It is hoped that exploration of these issues will help educational leaders and policy makers better understand these factors, and consequently improve the likelihood of successful policy implementation.

**Connections to Prior Research**

Research in the area of school reform and, in particular, curriculum reform has been mixed in terms of findings and factors contributing to successful efforts (Finnan, 2000; Finn, 2002; Datnow, 2005). However, there is significant agreement as to the complexity of these elements and the important role of context in determining the outcomes of various initiatives. As Finnan found in his exhaustive ten year study of school reform implementation in South Carolina, even under the best of circumstances, “many school communities still struggle to implement reform because they underestimate the complexity of school change” (2000, p. 3).

Though the success of school reform policy is dependent upon numerous factors influencing their inception, funding, support and evaluation of outcomes, this study focuses primarily on implementation at the school level. “Compared to other subfields in political science and policy studies, the study of public policy implementation is relatively new” (Cooper, Fusarelli, & Randall, 2004, p. 84). Emerging in the latter half of the twentieth century, Cooper, Fusarelli, and Randall (2004) argue that we are now in a third stage of implementation research, in which this type of inquiry into education policy:

…has shifted from macro-level analyses of programs to micro-level studies of the particulars of implementation at the local level. In part, this reflects changes in the
dominant paradigm of educational research, from macro-level quantitative studies to micro-level ethnographies and case studies. (p. 87)

This inquiry, as a qualitative exploration of educator experiences in two unique cases, certainly fits within this description.

Implementation of school reform policy represents a significant learning challenge on the part of educators. When this type of change is viewed as organizational learning, policy implementation in schools can be understood in terms of the central ideas of systems thinking and organizational learning theory. This study references Collinson and Cook’s (2007) definition of organizational learning (OL) as, “the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organization in ways that support shared aims” (p.8). Viewed in this way, reform efforts to be enacted by administrators and teachers are characterized as collective rather than individual learning (Steinbach, 1995, p. 22).

Research connecting school reform to organizational learning is still in the early phases, emerging only within the last twenty years. In their synthesis of studies testing the applicability of OL to school contexts, Leithwood, Leonard and Sharratt (1998) concluded that the quality of teacher collaboration, school culture and supportive leadership impacted the ways schools changed and corresponded to the central tenants of OL theory. To date, a variety of different OL frameworks have been found to be applicable to the educational context and helpful in illuminating the dynamics involved in school change. Elements of
these frameworks prove particularly helpful in understanding the findings from this study and are discussed in the next section.

Findings from this study also point to research in the area of teacher self-efficacy. Bandura (2006) defines self-efficacy as being “concerned with perceived capability” (p. 308). The teachers involved in this comparative case study repeatedly expressed feelings about their abilities and self-perceptions of success (or lack thereof). Bandura’s (2006) explanation of how these perceptions impact practice are helpful in understanding how these particular teachers’ levels of self-efficacy impacted their implementation of Common Core:

Efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically. They also influence the courses of action people choose to pursue, the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavors, the outcomes they expect their efforts to produce, how long they persevere in the face of obstacles, their resilience to adversity, the quality of their emotional life and how much stress and depression they experience in coping with taxing environmental demands, and the life choices they make and the accomplishments they realize. (p. 309)

Research on educators’ self-efficacy supports the notion that it is directly related to the ways they carry out teaching and learning processes. “Based on social cognitive theory teacher self-efficacy may be conceptualized as individual teachers' beliefs in their own ability to plan, organize, and carry out activities that are required to attain given educational goals.”
(Skaalvick, 2010, p. 1059). Skaalvick (2010) goes on to connect this concept to the ways schools are impacted by teacher perceptions and efficacy-levels, saying, “one may argue that it is reasonable to predict that perceived collective efficacy affects individual teacher self-efficacy. Schools characterized by high collective teacher efficacy set challenging goals and are persistent in their effort to meet these goals” (p. 1060).

**Connections to Recent Research**

As this study was being conducted, others across the United States were also launching investigations into initial implementation. Two such studies were brought to the attention of this researcher: “Fulfilling the promise of Common Core State Standards: Moving from adoption to implementation to sustainability” (2012), a publication put out by the Association for Supervision and Curriculum Development (ASCD) summarizing their Gates Foundation funded study of initial implementation in four states, and “Implementing the Common Core Standards in urban public schools – 2012” (2012), a study of initial implementation in 36 urban school districts, conducted by The Council of the Great City Schools (CGCS).

Though the scope of the two studies, and the methods they employed, were quite different, the data presented pointed to similar developments and concerns. Findings from the CGCS (2012) survey included:

- ACT projects that roughly a fourth of students in large cities will be able to meet College Readiness Benchmarks;
Approximately 87 percent of urban school districts plan on fully implementing the CCSS by the 2014-2015 school year;

Over half of respondents have already assessed the alignment between their district’s current curriculum and the CCSS;

Sixty-one percent of respondents are currently developing new criteria for evaluating teachers that are aligned with the CCSS; another 23 percent have already developed such criteria;

Approximately 87 percent of respondents are currently in the process of developing a communications strategy to inform key stakeholders of their district’s implementation. (p. 4)

In their executive summary, ASCD (2012) summarized what they had found through four state summits and additional data gathering:

Educators’ knowledge and awareness of the Common Core State Standards were growing rapidly, but not necessarily in terms of the deeper level of mastery that students need to meet the standards.

Many educators were focused on the new common assessments and the accompanying technology issues associated with their deployment.

There was widespread initiative fatigue in the field.

The vast majority of educators want each child, in each school, in each community to be college and career ready, but there was a lack of understanding about the shift to higher standards. (p. 5)
Similar threads can be found in the findings from this study, which are summarized in the following section.

**Summary of Findings**

The previous chapter presented the data collected from the two schools included in the comparative case study. This section provides a summary of the analysis and findings from the collected data, organized in terms of the three framing research questions.

*How do schools respond to large-scale policy change?* In the initial phase of adopting the change, teachers, principals and county coordinators began to interpret the policy, frame what it meant to implement, and collaboratively act to put the new standards into practice. Interpreting involved defining Common Core as representing deeper, more rigorous standards and perceiving the potential benefits of the change for students, schools and society. Implementation was overwhelmingly characterized by participants as a collaborative effort that was unfolding gradually as educators at each level made sense of the policy.

*How do teachers experience the shift to adopt Common Core State Standards?* Teachers’ perceptions of these experiences centered around impacts the policy change was having on them, personally and professionally, on their students and on the broader educational and societal landscape. Teachers described specific impacts to their self-image as educators, noting the compromises they made, the frustrations of learning while doing, and feelings that they were duplicating effort.

*How do contextual factors shape organizational learning in schools during the initial implementation of a new policy?* Contextual factors most impacting implementation and
learning experiences included time and pacing, communication and the perceived usefulness of training and resources. An additional factor that significantly impacted school-level interpretation and implementation was the concurrence of other district initiatives.

**Discussion of Findings**

Findings reflect the complexity of implementing curriculum reform policy at the school level. When viewed as an organizational learning (OL) process, implementation of Common Core standards can be understood through the lens of systems thinking and OL frameworks. This section expands on the findings summarized above in a discussion linking the data to elements within a theoretical framework treating school reform as organizational learning. Figure 5.2 provides an overview of this framework as outlined within the in Chapter 2 review of literature.

![Theoretical Framework – School Reform as Organizational Learning](image)

*Figure 5.2. Theoretical framework*
Organizational learning (OL) theory has emerged over the past two decades as a means to better understand school reform. Systems thinking, interpretation models and the 4I framework, in particular, are helpful OL structures for examining the learning and change processes that occur when schools attempt to implement change.

A common theme throughout this inquiry has been viewing the various implementation dynamics as one system of interrelated components and contexts. McLaughlin and Talbert (2003) state that “most fundamental to reforming districts is their focus on the system as the unit of change” (p. 10). In the case of Common Core, the system is much larger, enveloping the state and federal levels as well. Coghlan’s (2000) model of Systemic Inter-level Change (Figure 2.4), in which all of the levels of the system interact and impact what happens at the other levels, can be adapted to help understand this specific process (Figure 5.3). In this visualization, the “funnel” of policy (Figure 5.1) becomes much more complicated as it is implemented and cross-level feedback loops come into play. Decisions made at each level impact what is happening both above and below, with each level experiencing not only the ramifications of their own actions, but those of the other four levels as well. When you factor in the fact that each individual level represents multiple players and entities, the complexity becomes overwhelming.

Comprehending this degree of complexity might be better understood as an ecology of change. The ecological analogy in which organisms are interdependent, impacted by environmental conditions and experience adaptation and succession (Peirson & Ferguson, 2011) provides a useful frame for the kind of deep change represented in the shift to
Common Core. This conceptualization of school reform processes acknowledges the key role of contextual factors. The results of this study demonstrate this relationship in the shaping of initial implementation and may be predictive of the trajectory and sustainability of the process over time. The numerous instances in which study participants at various levels – district, school administration, and teachers – pointed to factors beyond their immediate surroundings, stands in evidence of this. As Scarboro C&I Director, Clinton Tokar acknowledged when interviewed in December 2012:

You know, we sit in this office and complain about DPI and the teachers sit in the teachers’ lounge and complain about us, you know and that’s just kind of how it works. We’re responding as a state to federal directives, Race to the Top dollars that have previous agreements about teacher effectiveness and those things. But, you know, managing the frustration of our teachers and communicating change and why it’s happening and kind of who’s responsible to some extent but getting them to move through it and work, continue to do the big work. The end goal hasn’t changed, what we’re trying to accomplish hasn’t changed. Some things in the middle and the requirements, and different mechanisms have changed but we still intend through the Common Core to create a generation of 21st century learners. So, it’s been a huge challenge.

Double-loop learning. The nature of the change itself, characterized by several of the study participants as a massive paradigm shift, matches the OL theory of double-loop learning put forth by Argyris and Schön (1978). Given that teachers and administrators in
this study repeatedly pointed out that new standards required them to fundamentally change
the ways they thought about and approached teaching, the evidence suggests that they were
in fact engaging in the kind of higher-level or double-loop learning required for deep change
(Argyris & Schöen, 1978; Fiol & Lyles, 1985). As one Demery teacher described on the first
survey, “Teachers having to change how they always taught. To really teach these new
standards well, you have to teach them differently and that is hard for teachers.”

However, instances where teachers spoke to the contrary – in this study, primarily
Sayer teachers – one must ask if these teachers may only be experiencing lower-level or
single-loop changes that will not be transformative or sustainable. If one also considers the
fact that teachers felt that their voices and concerns were not a part of the decision-making,
the democratic nature of true double-loop learning would also come into question.

**Interpretation.** Interpretation on the part of participants at different levels played a
key role in both schools’ implementation of new standards. The results of this study support
Daft and Weick’s (1984) assertion that, “Almost every other organizational activity or
outcome is in some way contingent on interpretation” (p. 293). Findings in this study suggest
that, as with other activities, interpretation of Common Core State Standards was shown to
occur to some degree at each level and interpretations were filtered and communicated from
each level to all others. No level seemed to rely completely on the interpretations from the
others, investing significant time and energy into sense-making for themselves and the
players immediately around them. Where interpretations differed among the levels –
particularly between teachers and administrators – tension was created in the system and forward movement was made more difficult.

**4Is – Intuiting, interpreting, integrating and institutionalizing.** The 4I Framework, developed by Crossan, Lane and White (1999), places interpretation within the context of the overall learning and implementation process. This framework suggests that organizational learning involves *intuiting, interpreting, integrating* and finally *institutionalizing*, with each process occurring to some extent at the individual, team and organizational level. Findings from this research support that the majority of time and energy in the initial phase of Common Core implementation was spent on intuiting and interpreting the policy. Teachers and administrators spoke of the need to understand the standards and translate what they meant for classroom practice. Though staff development and trainings were described as focusing on this very aspect, few of the study participants seemed to have solid confidence in their understanding at the end of the first semester. When asked in December to rate their comfort with standards in terms of being very comfortable, somewhat comfortable or uncomfortable, or not at all comfortable, only one teacher out of the two combined faculties’ respondents said they were very comfortable. 95% of Demery respondents and 79% of Sayer respondents said they were somewhat comfortable, with the rest rating themselves as somewhat uncomfortable or not at all comfortable. One Demery survey respondent added the comment, “Still in the learning phase, but becoming a little more comfortable.”
According to state mandates, teachers were compelled to integrate the policy into their practice even as they grappled with intuiting and interpreting what it meant. This created significant tension and many teachers felt unsure of their integration as reflected in the frequent use of metaphors such as “building the plane while flying it.” The uneasiness felt as they began implementing also impacted the ways they were able to select and use resources. The time teachers spent scanning and evaluating the massive amount of untested strategies and tools that were suddenly widely available on the internet took away from not only their personal lives but also their ability to put quality tools in place.

March (1991) refers to this as a trade-off between exploration and exploitation. The data presented in this study suggests that teachers, at the end of their first semester of mandated implementation, had not approached this balance. This is not surprising in light of the on-going and uncertain interpretation at other levels. As March (1991) describes, “Finding an appropriate balance is made particularly difficult by the fact that the same issues occur at levels of a nested system – at the individual level, the organizational level, and the social system level” (p. 72).

The sustainability of any policy rests in whether or not it able to be routinized or institutionalized within the system. The time frame of this study was not sufficient to capture this level of implementation, which is not surprising considering the scope of the change. As Garrel RttT Coordinator, Neil Goods put it, “It’s going to be a long process, measured in years, not semesters.” (personal communication, Dec. 13, 2012). However, if current
conditions persist, findings may reveal possible threats to policy institutionalization as envisioned by its creators.

One possible threat rests in the wheel-spinning being experienced on the part of teachers. A prolonged period of effort that is perceived as duplicative, incorrect or unfocused is likely to lower morale and lead to a lower quality of implementation overall. Continued ineffective communication and constant reinterpretation from upper levels and administrators could also prove to be barriers to sustained and consistent implementation.

An additional potential threat is the mismatch in messaging and “support” for teachers. Both districts’ administrative teams sought to communicate that they trusted teachers to be creative, try new things, collaborate to exchange ideas, and even make mistakes as they began implementing the new standards. Both districts also employed PLCs and district-wide classroom walkthrough processes to support implementation. However, the way these items were associated was very different for the two schools being studied.

When interviewed, both Scarboro and Garrel RttT coordinators identified PLCs as being a critical component and both described a walkthrough process being related to how they were monitoring and supporting implementation. At the school level, teacher interviews and focus group discussions revealed that Demery teachers felt supported by these processes, while Sayer teachers felt impeded by them. Demery teachers saw PLCs as beneficial because they were able to focus their collaboration on the work of Common Core. Given that they never mentioned the walkthrough teams, it could be concluded that they were not
significantly impacted by the process, which was primarily focused on providing data to administration anyway.

At Sayer, on the other hand, PLCs were perceived to be confined to discussions about data and not able to be used for collaboration around implementing Common Core. Whereas Demery teachers never mentioned their district’s walkthrough teams, the GCS team was viewed by Sayer teachers as a tool for scrutiny that restrained their creativity and ability to try new things. Liza Aasen characterized the impact of the GCS team in this way:

Even once the Common core is learned and we understand it, I think the GCS team is going to throw a negative part in the mix. It’s not looked upon, as you [Dona Disalvo] said, help or support. I think when a lot of the teachers see the GCS team coming over, they get scared and nervous.

This suggests that, for Sayer teachers, there was a mixed message. While they were being told that their expertise was valued and they were trusted to make good decisions about their practice, they were sensing that if they stepped out of their comfort zones, they would be judged and graded down for any missteps.

What Sayer teachers were likely experiencing was a discrepancy between a commitment message versus a control strategy. Rowan (1990) defines strategies for school reform as falling into two categories, commitment strategies and control strategies, and
describes them alternatively:

*Commitment strategies* – View of teaching as complex and leadership as emerging and distributed. Teachers are actively involved in decision-making, and the system acts as a network instead of hierarchy.

*Control strategies* – View of teaching as routine, relying on graduation requirements, competency testing, curriculum alignment, instructional management systems, teacher evaluation and career ladder systems. Focus is not on the goals but on the means to achieve them.

The message of trust and support for creativity suggests a reliance on teachers’ commitment, but runs counter to the perceived control of the walkthrough teams. Considering the level of frustration and emotion displayed by Sayer teachers as a result of this inconsistency, implementation under such conditions seems unsustainable. Institutionalization in such an environment may prove elusive – or may become reliant on the educators who inevitably replace those who could not withstand the pressure.

The incongruence of commitment and control strategies must also be considered in the larger context, whereas the Common Core standards themselves represent a control strategy. As Rowan’s (1990) analysis indicates, “The active regulation of states, especially those operating with a control strategy for school improvement, will affect the ability of local schools to develop organizational designs of their own choosing” (p. 384). This seems to suggest that it would be difficult for schools operating in a “commitment” vein to successfully implement national standards. However, the findings from Demery, where
teachers seemed to reflect the commitment approach of their administration and a successful initial implementation of the new standards, suggest that a balance between the two strategies may be both necessary and possible.

Limitations

As a qualitative case study performed by a novice researcher, the design of this research poses limitations to the generalizability of results. One limitation is the sample size, which was confined to the faculty and administration of two schools and one central office administrator from each district. The time period of the study was also limited to a portion of one school year, though it should be noted that this short time frame was also the critical initial phase of implementation. While these factors represent considerable limitations, this is among the first studies of its kind to address implementation of Common Core State Standards and presents important lessons for both policy-makers and practitioners.

Implications for Policy

Findings from this research suggest that educators at the implementation level perceived the primary benefit of national curriculum standards as creating consistency across schools and states. However, teachers and administrators pointed out a lack of coordination at the federal and state levels in terms of bringing states and districts together to share resources and best practices. Decision-makers at the federal level should consider creating structures for more collaboration and idea sharing across states. For example, searchable databases of implementation resources would allow educators across the country to access road-tested strategies in a more cohesive way. Communication channels that create
opportunities to hear from teachers would also help link federal efforts to the ground level in a more meaningful way.

At the state level, data suggests a need for better balancing between the aim of cohesiveness and the political need for local control. Taken as a whole, North Carolina school districts value the power to make decisions at the county and school level. However, when district leaders are required to make important decisions in the absence of critical information, they may plan in ways that lock their schools into counterproductive measures. Structures for guided cross-district collaboration at the very early stages of planning would be beneficial and might be more successful if they reach beyond groupings based on Regional Educational Service Agencies (RESAs). The current North Carolina RESA structure that anchors this type of collaboration to geography alone does not seem to fill the needs. As Garrel County RttT Coordinator, Neil Goods, explained:

Our region is just so different. There’s us with 2000 teachers, there’s Taylor City with 600 and that’s three times larger than all the rest. I don’t even know why we’re in it. We really need to be with more of the Smith Counties, yeah, other larger counties because that’s who I need to pull stuff from. So, in that sense, I’m not sure it’s beneficial. It’s been beneficial for me, for others on my team, but I’m skeptical of how much it filters down.

Efforts to bring together districts with similar characteristics (size, structures, socio-economics, etc.) might be better able to create meaningful collaborative relationships between districts across the state.
Findings from this study also suggest that state level policy-makers must work harder and smarter to ensure the kinds of clear communication and appropriate pacing that ensure credibility and build trust among those who will enact and implement at the school-level. An inability to accomplish this only leads to what Jere Confrey (2012), a member of the National Validation Committee for the standards, referred to as teachers having an “appropriate skepticism to what is going to hold” (personal communication, December 17, 2012).

Implications for policy at the district level point to a fundamental need to connect any new policy to a clear district vision that links to other district initiatives and encourages a unified approach. Teachers in both schools included in this study felt overwhelmed by the numerous programs that they were implementing as part of or alongside Common Core. Reeves designates this phenomenon, “initiative fatigue.” Reeves (2010) Law of Initiative Fatigue states that:

When the number of initiatives increases while time, resources, and emotional energy are constant, then each new initiative—no matter how well conceived or well intentioned—will receive fewer minutes, dollars, and ounces of emotional energy than its predecessors. (p. 27)

District policy-makers could minimize initiative fatigue by clearly communicating a limited set of district priorities that encompass the change and either align or eliminate competing programs or processes. District leaders must also look beyond state-sanctioned collaborations and actively network with other similar districts to share successful practices and lessons-learned.
The overall implications for policy add up to a need for better coordination among the various levels. McLuaglin and Talbert’s (2003) advice to reforming districts seems applicable to all levels in the policy funnel; “A strategic conception of district roles and functions - one that considers context, reform stages and the division of and responsibilities and leadership between system levels – appears critical to school reform” (p. 25).

**Implications for Practice**

For district practitioners charged with enacting and supporting policy implementation, findings suggest a need for better communication and better designs for the management of training and resources. In terms of communication, recognition that incomplete or incorrect information (in some cases emanating from the state level) cannot be completely avoided should encourage more intentional filtering and precision of communications within the district school community.

Ineffective communication can also be linked to reduced effectiveness of training and resources. Findings from this study suggest that teachers value training that moves beyond the “what” and “why” of policy to the “how,” allowing them to actively plan, select and create resources with the guidance of knowledgeable facilitators. Professional development designs that emphasize application and build in time for practice could help teachers make the connections between the theory, the information provided and their actions in the classroom. The scheduling of such trainings should also take into account not only the personal lives of teachers but also the fact that distributed sessions allowing teachers to apply their continued learning can lead to more impactful changes in practice.
Given that many study participants saw resources as both a help and a challenge, a focus on ensuring easy access to a limited number of high quality resources seems preferable to either suggesting too many tools or providing resources that prove not to be useful. Channels for gathering ongoing feedback from teachers and principals would help in the tailoring of both training and resources to better meet their needs. In larger districts, this function might be directed by a team of curriculum directors or specialists. For smaller districts and for continuity across the state, this could also be a coordinated at the RESA level.

At the school level, principals and coaches are in the role of both supporting implementation and filtering information that is coming from above and must be communicated meaningfully to the faculty. As with all other levels, straightforward discussion focused on a clear vision and unambiguous expectations is critical. The results of this study suggest that time and energy spent on deliberate and articulate messaging is a wise investment. It may not be enough to simply put into place support structures such as PLCs, protected time and classroom observation. Such structures must be thoughtfully aligned and constantly evaluated as to their effectiveness in supporting implementation.

For classroom teachers implementing Common Core or any other large scale reform, the findings of this research likely reflect what they and/or their colleagues have felt at some point in the process. Acknowledging that our present reform landscape is likely to be repeated many more times in the future, educators who see themselves making the classroom their career would be well advised to take the long view. As each new wave of change brings
on different impacts to their practice, staying connected to the fundamentals of what it means
to teach may be the key to maintaining a sense of balance.

For the participants in this study, their collaboration with colleagues, view of
themselves as constant learners and the ability to balance school and home life were
significant factors in their perceptions and experiences of implementation. In my own
experience working with classroom teachers, I have also found that those who can find in
each new policy or initiative some connection to what they believe to be fundamentally true
about teaching and learning, seem to be best able to – even in the most stressful situations –
stay afloat and keep their heads above the water.

Additional Considerations

Although beyond the scope of the research questions and the intended focus of this
study, a number of additional and significant findings emerged about the impact of the policy
change on teachers. Almost from the very beginning of this inquiry, the discussions with
teachers were emotionally charged and revealed substantial amounts of stress. The first
interview with Sayer teachers (detailed in Chapter 4) ended with three of the focus group
members in tears. Given that these three women were all veteran teachers identified by their
peers as leaders within their school faculty, their emotional breakdown was all the more
unsettling. Shanna Wiens, fifth grade teacher at Sayer, and one of the focus group members
not in tears, summed up her feelings:

Well, I am single and I have no kids and my time is consumed, so I can only imagine
how moms feel, wives feel. Some nights, I leave here with the janitors and it’s not
that I’m doing above and beyond. I’m just planning my part of the lesson for my team. So, the timing, I’m doing more this year than I did my first year of teaching when I was learning the NCSCOS. So, I feel like my time, your personal time, is just getting swept away.

Even through the tears, nearly all of the teachers involved in this study saw the positive aspects of Common Core and wanted to “do it right.” However, if school leaders and policy makers ignore the strong emotions, high stress and continuous frustrations of the teachers who are ultimately tasked with bringing the promise of new standards to fruition, they not only threaten the success of Common Core, but of any policy changes attempted in the future. If good teachers become the collateral damage of implementation, it is hard to imagine a net positive outcome for students. Additionally, if the shift to Common Core State Standards initiates a mass exodus of qualified educators, it could end up creating a larger problem than it intended to resolve.

Suggestions for Further Research

This study employed a qualitative approach to explore implementation in two comparable elementary schools. Thus, one recommendation for further research in this area would be to expand the sample size and study implementation in more and diverse schools, including secondary levels. Studies that further illuminate the contextual factors in varied school environments and further uncover patterns of implications would be beneficial.

As more states move toward full implementation of new standards, it will also be important to follow schools over time and track longitudinal trends. Within the 4I
Framework, this study found evidence of intuiting, interpreting and integrating, but was not able to capture institutionalizing within the limited time frame. Studies that collect data around implementation over several school-years would be better able to evaluate the extent to which the policy is or is not institutionalized.

Among the most compelling findings from this study are the direct comments from the teachers themselves. However, teacher voices are not commonly a factor in decisions made above the school level. Given that teachers are ultimately the determinant of whether educational policy is enacted, or at all able to succeed, studies that include their experiences and perceptions have the potential to amplify those perspectives to the level of policy discussions and ultimately impact the way policy is created and enacted.

Additionally, studies that further investigate the funneling of policy (as in Figure 5.1) are needed to help create better alignment among federal, state, district and local levels. In light of the growing role of national and federally directed school policy, studies that reveal how the discussions and processes flow from this top level down to schools and classrooms could be beneficial to all levels and help to create more positive outcomes for students.

**Conclusion**

Change is a constant in today’s education landscape and Common Core State Standards represent one momentous link in a long chain of reforms that is likely to stretch far into the future. As educators grapple with each coming wave – whether they are in the role of creating, conducting, or implementing change – they must come to terms with the complexities among all of the levels in the funnel. Each level possesses the opportunity to
either advance or inhibit the process. If any one level ignores the complexities above or below them, they may seek to move an initiative forward but unwittingly create the exact opposite effect.

Thus, for policy to be successful, all levels must seek to be mutually reinforcing, taking on an ecological awareness that considers the perspectives from each level involved. And, in this environment of constant change, it seems that dedicated and determined school-level educators – teachers and administrators – would be well advised to withstand each wave by anchoring themselves not to the current trend, but the reason they likely entered education to begin with – doing what is best for students.

If viewed as just another link in the school reform policy chain, Common Core State Standards may – as some critics predict – end up on the heap alongside other failed reform efforts. If, however, Common Core is successfully implemented as the paradigm shift it is intended to be, it has the potential to stand in history alongside such sea changes as those brought on by The Committee of Ten and the publication of A Nation at Risk. The question remains as to which will be the case.

If the findings from this study of initial implementation are a predictor of outcomes, they suggest that adjustments are in order. Specifically, policy-makers and decision-makers need to take a long look at the demands they place on educators at the school level when they mandate a compressed timeline and set expectations that ignore existing conditions and competing initiatives. The frustration and exhaustion expressed by the teachers involved in
this study go beyond the typical workplace venting and their concerns should be considered as valid indicators of real problems that must be addressed.

As a staff developer, I also draw conclusions for my own practice and have already begun to make adjustments in the ways I work with school-level educators. The interactions within this study between focus group members – the ways they opened up to one another, cried with one another and supported each other – have stayed with me. These types of interactions are critical, but often find little room within the overstuffed school day.

I see a great need to create a “gracious space” (Hughes, 2012) within teacher and principal staff development for educators to dialogue, fellowship and create the kind of rich professional culture that builds and retains great teachers. It seems that if the demands within Common Core for deeper, richer learning on the part of students has any possibility of coming to fruition, the same levels of thought, discussion and collaborative problem solving must be ensured for the educators assigned with such a task. This can only happen if those of us in the role of designing and delivering professional development for educators take our own advice to create learning environments that encourage group reflection and intentional exploration.

Needless to say, this begins at the policy level, where many decisions about teacher and principal learning are shaped. If change is now the constant for educators, then learning must also be a constant priority for teachers and school administrators. It is my belief that ignoring this very basic need compromises not only the success of any one policy, but the sustainability of the system as a whole.
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APPENDICES
### APPENDIX A

**Summary of Literature**

<table>
<thead>
<tr>
<th>Source</th>
<th>Topic/Research Questions</th>
<th>Type of Inquiry</th>
<th>Findings/Conclusions</th>
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<tbody>
<tr>
<td><strong>School Reform Policy</strong></td>
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<tr>
<td>Fusarelli &amp; Fusarelli, 2003</td>
<td>Discusses increased involvement of state and federal governments in school reform and asks whether educational systems have the capacity to implement systemic reforms.</td>
<td>Policy analysis</td>
<td>Public schools and education policy is becoming more centralized, but the system remains fragmented and the efficacy of systemic reform efforts needs further study.</td>
</tr>
<tr>
<td>McDermott &amp; DeBray-Pelot, 2009</td>
<td>Argues that NCLB dramatically increased federal control over school accountability, beyond the understanding of congress.</td>
<td>Policy analysis</td>
<td>The specific mandates within NCLB require further scrutiny before it is reauthorized.</td>
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<tr>
<td>Vinovskis, 2007</td>
<td>Evaluates U.S. federal education policy from the early 1980s to 2009</td>
<td>Historical and policy analysis</td>
<td>Overall, federal compensatory education programs have failed.</td>
</tr>
<tr>
<td>Purkey &amp; Smith, 1985</td>
<td>Based on the effective schools literature, what local strategies and</td>
<td>Literature review</td>
<td>4 recommendations for district-level improvement: 1) focus on school</td>
</tr>
<tr>
<td>Source</td>
<td>Question</td>
<td>Methodology</td>
<td>Summary</td>
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<tr>
<td>U.S. Department of Education, 2004</td>
<td>Are CSRD funds well targeted to schools with the greatest need? Have schools implemented the nine components of CSRD? Has student achievement improved in funded schools?</td>
<td>Quantitative evaluation study</td>
<td>Funds were well-targeted but implementation was mixed. CSRD school outcomes were not significantly different for those of non-CSRD schools.</td>
</tr>
<tr>
<td>Finn, 2002</td>
<td>What is the role of “accountability” in U.S. public education?</td>
<td>Historical review of policy</td>
<td>Competing priorities have led to 3 types of accountability: professionalism, market-based and standards-based.</td>
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<tr>
<td>Datnow, 2005</td>
<td>Why do reforms sustain in some schools and not in others? How do changing state and district contexts influence reform sustainability in schools?</td>
<td>Qualitative longitudinal case study</td>
<td>Changing district and state contexts affected the sustainability of CSR models in schools differently depending on each school’s strategy for dealing with the changes, as well as their local conditions, experiences with reform, and capacity.</td>
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<tr>
<td>Author(s)</td>
<td>Key Questions</td>
<td>Methodology</td>
<td>Findings</td>
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<tr>
<td>Cooper, Fusarelli, &amp; Randall, 2004</td>
<td>Examines implementation of school reform policy</td>
<td>Policy analysis, literature review</td>
<td>Successful implementation is possible, but requires a match between the problem, the local capacity and will, and the proposed solution.</td>
</tr>
<tr>
<td>Finnan, 2002</td>
<td>Why do some reform efforts fail? Can failure be predicted and avoided?</td>
<td>First-person narrative study</td>
<td>Many reforms fail because of lack of compatibility between the model and the culture of the school and its classrooms.</td>
</tr>
<tr>
<td>Johnston, 2002</td>
<td>What are the challenges to successful school reform? What are the policy implications of these identified challenges?</td>
<td>Review of mixed-methods program evaluation data from NC CSRD schools</td>
<td>Failures are connected to absence of two key elements – comprehensive design perspective and critical analysis during implementation.</td>
</tr>
<tr>
<td>Lohman, 2010</td>
<td>How do NCLB and RttT differ?</td>
<td>Comparative policy study</td>
<td>Though the goals are similar, NCLB mandated change and RttT provides incentives for changes that go beyond the depth of NCLB.</td>
</tr>
<tr>
<td>Bohmer, 2011</td>
<td>How are young children and their literacy practices represented in CC standards, and how are those constructs</td>
<td>Literature and policy review</td>
<td>The standards are not wholly evidence-based and teachers should continue to rely on established sources of learning.</td>
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<tr>
<td>Source</td>
<td>Question</td>
<td>Methodology</td>
<td>Findings</td>
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<tr>
<td>Dewey, 1902</td>
<td>What are the opposing schools of thought on the role of curriculum and can they be resolved?</td>
<td>Historical review and theoretical discussion</td>
<td>The two schools (psychological and logical) can work together as an explorer works with a map.</td>
</tr>
<tr>
<td>Smith &amp; O'Day, 1990</td>
<td>How can states significantly and consistently improve educational outcomes for all students?</td>
<td>Literature review, case study and policy analysis</td>
<td>Real improvement requires coherent efforts and policies from the state level.</td>
</tr>
<tr>
<td>McLaughlin &amp; Talbert, 2003</td>
<td>Do districts matter in reform progress? What do successful districts do to achieve systems change?</td>
<td>Longitudinal comparative case study</td>
<td>Treating the district as the unit of change is essential for essential reform.</td>
</tr>
<tr>
<td>Change Theories</td>
<td>How do we define systems? What is the role of systems in organizational design?</td>
<td>Literature review</td>
<td>Systems thinking and critical reflection on practice are essential for organizations to be successful.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title of Study</td>
<td>Research Question</td>
<td>Methodology</td>
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<tr>
<td>Senge, 1990</td>
<td>What are the disciplines of the learning organization?</td>
<td>Case studies and discussion</td>
<td>Systems thinking is vital to successful organizations.</td>
</tr>
<tr>
<td>Rajagopalan &amp; Spreitzer, 1997</td>
<td>How can the divide between “content” and “process” strategic change literature be reconciled?</td>
<td>Literature review</td>
<td>A multi-lens approach allows for blending of the two schools of thought. Research questions for further study are suggested.</td>
</tr>
<tr>
<td>Peirson and Ferguson, 2007</td>
<td>Can an ecological process model of systems change be effectively applied to policy driven systems level change in publicly funded social programs?</td>
<td>Case study</td>
<td>The model is a useful tool and should be used in conjunction with complementary models to understand systems change.</td>
</tr>
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</table>

**School Change**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title of Study</th>
<th>Research Question</th>
<th>Methodology</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Fusarelli, 2011</td>
<td>What are the major trends in U.S. society as related to education and student outcomes and what are the implications for education policy and at-risk student populations?</td>
<td>Policy analysis</td>
<td>Schools reflect larger social conditions and, in such, education policy must take these factors into account if they are to be successful.</td>
<td></td>
</tr>
<tr>
<td>Fullan &amp; Steigelbauer, 1991</td>
<td>Has the cumulative effect of attempted reform been positive, negative or neutral? How do we know when change</td>
<td>Policy analysis</td>
<td>The negative legacy of failed reforms can only be overcome through individual and institutional renewal.</td>
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<tr>
<td>Author(s)</td>
<td>Question</td>
<td>Methodological Approach</td>
<td>Summary</td>
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<tr>
<td>Thompson, 2010</td>
<td>How do scholar–practitioner leaders allow theory to inform their practice and then reflect on their practice to revise theory?</td>
<td>Literature review</td>
<td>School leaders must be “scholar-practitioners” to successfully implement educational reform.</td>
<td></td>
</tr>
<tr>
<td>Berson, Nemanich, Waldman, Galvin &amp; Keller, 2006</td>
<td>Can the 4I framework be used to organize the literatures on organizational learning and leadership?</td>
<td>Literature review</td>
<td>Throughout the learning process, leaders provide the guidance necessary to cross organizational boundaries and integrate what is learned.</td>
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<tr>
<td>Senge, Cambron-McCabe, Lucas, Smith, Dutton, &amp; Kleiner, 2000</td>
<td>How can the “fifth discipline” be practically applied in schools?</td>
<td>Case study, literature review and discussion</td>
<td>Schools must become learning organizations if they are to be successful.</td>
<td></td>
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<tr>
<td>Price-Moriarty, 1999</td>
<td>What factors influence the effectiveness of a program (IST) at the school level and what is the leader’s role?</td>
<td>Comparative case study</td>
<td>The effectiveness of mandated programs ultimately depends on the leadership of teachers and school administrators in implementing the program.</td>
<td></td>
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<tr>
<td>Spillane, 2000</td>
<td>How do district leaders interpret and respond to instructional</td>
<td>Policy analysis, case study</td>
<td>District leaders’ cognition is a key factor in the successful implementation of</td>
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<tr>
<td>Author</td>
<td>Research Question</td>
<td>Methodology</td>
<td>Findings</td>
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<tr>
<td>Little, 1993</td>
<td>How do current reform movements shape challenges, possibilities, and constraints for teachers' professional development? What are the limitations of the dominant training paradigm for purposes of achieving the reform agenda?</td>
<td>Literature review and policy analysis</td>
<td>Patterns of professional development do not match goals and challenges of reform efforts.</td>
<td></td>
</tr>
<tr>
<td>Olsen &amp; Sexton, 2009</td>
<td>How does a school’s reform climate (influenced by local, state, and federal education policy cultures) affect teachers and their careers? How do these teachers in turn affect the school’s reform climate?</td>
<td>Qualitative case study</td>
<td>Policy suggestions: rethink structuring school culture, avoid threat rigidity, have teacher prep programs embrace current realities about education and school conditions.</td>
<td></td>
</tr>
<tr>
<td>Argyris, 1999</td>
<td>Examines organizational learning as a necessary competence for all organizations.</td>
<td>Literature review</td>
<td>More research is needed to create actionable knowledge for practitioners to overcome existing barriers to organizational learning.</td>
<td></td>
</tr>
<tr>
<td>Daft &amp;</td>
<td>Proposes a model</td>
<td>Literature</td>
<td>Organizations</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Description</td>
<td>Methodology</td>
<td>Additional Details</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Weick, 1984</td>
<td>Organizations are interpreted as interpretive systems.</td>
<td>Review/grounded theory</td>
<td>Interpret the environment in different ways according to beliefs about the environment and intrusiveness of the organization itself.</td>
<td></td>
</tr>
<tr>
<td>Levitt &amp; March, 1988</td>
<td>How do organizations learn from direct experience? How do organizations learn from the experience of others? How do organizations develop conceptual frameworks or paradigms for interpreting that experience?</td>
<td>Literature review</td>
<td>Organizations learn and create organizational memory within a complex ecology that includes outside conditions and other organizations.</td>
<td></td>
</tr>
<tr>
<td>Argyris &amp; Schön, 1978</td>
<td>Defines key factors in and processes of organizational learning</td>
<td>Grounded theory</td>
<td>Organizational learning can be classified into two types: single and double loop. Both types involve recognizing and addressing error.</td>
<td></td>
</tr>
<tr>
<td>Fiol &amp; Lyles, 1985</td>
<td>Clarify distinctions between organizational learning and change so that a better theory can be built.</td>
<td>Literature review</td>
<td>Inconsistency in the literature calls for more research in the area of measuring learning beyond mere changes taking place.</td>
<td></td>
</tr>
<tr>
<td>Coghlan, 2000</td>
<td>How do organizational</td>
<td>Case study</td>
<td>Levels of aggregation and</td>
<td></td>
</tr>
<tr>
<td>March, 1991</td>
<td>How does the balance between exploration and exploitation impact the survival and prosperity of an organization?</td>
<td>Literature review</td>
<td>Organizations must weigh choices about exploration and exploitation, knowing that there are costs to both, but both are necessary.</td>
<td></td>
</tr>
<tr>
<td>Crossan &amp; Berdrow, 2003</td>
<td>How does organizational learning explain the phenomenon of strategic renewal?</td>
<td>Case study</td>
<td>The comprehensive nature of the 4I framework connects facets of organizational learning that have often remained disconnected.</td>
<td></td>
</tr>
</tbody>
</table>

**Org Learning in Schools**

<p>| Collinson, 2007 | Is there a theoretically-based set of skills and practices that develop | Literature review | Despite the time and effort, building the capacity for continuous development appears |</p>
<table>
<thead>
<tr>
<th>Author</th>
<th>Question</th>
<th>Methodology</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collinson, Cook, &amp; Conley, 2007</td>
<td>How can organizational learning help schools be more successful in their reform efforts?</td>
<td>Literature review</td>
<td>By engaging in organizational learning and fostering the conditions that support it, members of schools and school systems can better transform the demands of change into opportunities for improvement on their own terms.</td>
</tr>
<tr>
<td>Rowan, 1990</td>
<td>Proposes two models of school organization: commitment and control</td>
<td>Literature review</td>
<td>Both strategies work best when applied intensively, but evidence is mixed as to the impact of either.</td>
</tr>
<tr>
<td>Fusarelli, 2002</td>
<td>Argument - the U.S. education system is becoming more tightly coupled in terms of policy and process.</td>
<td>Policy analysis</td>
<td>Evidence suggests that education systems are becoming more tightly coupled, but to be successful they must be both top-down and bottom-up.</td>
</tr>
<tr>
<td>Leithwood, Leonard, &amp; Sharratt, 1998</td>
<td>Given different stimuli for learning, and different organizational contexts, to what</td>
<td>Qualitative multi-case study</td>
<td>Results suggest that concepts of transformational leadership are well-matched to the</td>
</tr>
</tbody>
</table>
extent are there similarities and differences in the conditions that foster or inhibit such learning? Which conditions seem most robust across stimuli and contexts? Which conditions seem to vary by stimuli and contexts?

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Research Question</th>
<th>Method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leithwood, Jantzi, &amp; Steinbach, 1995</td>
<td>What are the causes and consequences of OL in schools? How do leadership practices contribute to such learning?</td>
<td>Qualitative multi-case study</td>
<td>1. OL processes are highly varied, 2. District role is underestimated, 3. Coherent sense of direction crucial for OL, 4. Sources of coherent direction are not obvious.</td>
</tr>
</tbody>
</table>

**4I Framework Applied to Schools**

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Research Question</th>
<th>Method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pan &amp; Chen, 2011</td>
<td>What is the link between teacher evaluation, organizational learning and school improvement?</td>
<td>Qualitative case study</td>
<td>Teacher evaluation was a catalyst for organizational learning.</td>
</tr>
<tr>
<td>Strong-Rhoads, 2007</td>
<td>How do teacher leaders develop leadership practices? What experiences have they had? What elements are essential for training?</td>
<td>Phenomenological study</td>
<td>Transformational classroom leaders are reflective, collaborative and flexible lifelong learners and these characteristics can be taught/learned.</td>
</tr>
<tr>
<td>Dalal, 2008</td>
<td>1) In what ways do</td>
<td>Exploratory</td>
<td>The inquiry process</td>
</tr>
<tr>
<td>Alcantara, 2009</td>
<td>How are different organizations with varying capacities for transferring individual knowledge to organization knowledge able to implement policy?</td>
<td>Exploratory case study</td>
<td>There were limitations to the model’s predictive power, largely since much of the learning that took place was in response to policy pressures placed on the organizations. Evaluation and routinization played a central role in the learning process.</td>
</tr>
</tbody>
</table>
APPENDIX B
Teacher Survey Protocol

Purpose:
• Collect new data to answer research questions:
  1. How do schools respond to large-scale policy change?
  2. How do teachers experience this type of policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
• Triangulate with principal and RttT Coordinator interviews, and focus group data

The following questions will be delivered via an anonymous and secure online survey accessed through a link emailed to each member of the two school faculties at the beginning of the school-year, in late August 2012.

Introduction:
Thank you for participating in this brief survey. The questions are designed to collect data on teacher experiences implementing Common Core standards. Your responses are anonymous and your candid answers are greatly appreciated. If you have questions about the survey, you can email the researcher at reporter@ncsu.edu. If you agree to participate, please click the link below to review the informed consent agreement and continue to the survey. (Link took participants to informed consent included in appendix I.)

<table>
<thead>
<tr>
<th>Survey Items</th>
<th>Answer Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
<td>Multiple choice: 0-2 years, 3-5 years, 6-8 years, 9 or more years</td>
</tr>
<tr>
<td>1. How long have you worked in your school?</td>
<td>Likert scale: Not at all comfortable Somewhat uncomfortable Somewhat comfortable Very comfortable Comments:</td>
</tr>
<tr>
<td>2. How would you describe your current comfort level with Common Core standards?</td>
<td>Likert scale: Beginning Developing Partially Implementing Fully implementing Comments:</td>
</tr>
<tr>
<td>3. How would you describe your grade level/team’s current level of implementation of Common Core standards?</td>
<td>Likert scale: Very unprepared</td>
</tr>
<tr>
<td>4. How prepared do you feel to fully implement the new standards?</td>
<td>Likert scale: Very unprepared</td>
</tr>
<tr>
<td>Question</td>
<td>Response Type</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>5. What do you see as the possible advantages of Common Core standards?</td>
<td>Open-ended paragraph response</td>
</tr>
<tr>
<td>6. What do you see as the biggest challenges to implementing Common Core standards?</td>
<td>Open-ended paragraph response</td>
</tr>
<tr>
<td>7. What resources/processes have contributed most to your ability to implement the new standards?</td>
<td>Open-ended paragraph response</td>
</tr>
<tr>
<td>8. What school/district conditions have helped with implementation?</td>
<td>Open-ended paragraph response</td>
</tr>
<tr>
<td>9. What school/district conditions have made implementation challenging?</td>
<td>Open-ended paragraph response</td>
</tr>
<tr>
<td>10. What do you need in order to move forward with implementing the standards?</td>
<td>Open-ended paragraph response</td>
</tr>
<tr>
<td>11. Other than school administrators, who would you identify as being leaders among the faculty in implementing the new standards (list up to three teachers).</td>
<td>Open-ended 3 blanks, at least one requiring an answer</td>
</tr>
<tr>
<td>12. Do you have any other comments you would like to share about your school’s implementation of Common Core?</td>
<td>Open-ended paragraph response</td>
</tr>
</tbody>
</table>

Questions 3, 4, 5 & 8 based on the Bill and Melinda Gates Foundation’s 2012 Primary Sources: America’s Teachers on the Teaching Profession, p. 110-111


Second, and third administrations of the survey omitted question 11. The wording of the remaining questions were edited to include the words “current” and “most recent.”
APPENDIX C
Principal Interview Protocols

Round 1 – Aug. 2012

Principal: __________________ School: __________________ District: __________________

Date: ___________ Time: ______________ Location: _______________________

Purpose:
- Collect new data to answer research questions:
  1. How do schools respond to large-scale policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
- Triangulate with RttT Coordinator interviews, teacher surveys and focus group data

Introduction
Thank you for agreeing to meet with me today. As you know, I am researching the initial implementation of Common Core State Standards. As part of my dissertation study, I would like to talk to you about your role in leading this change and your perspective on the implementation process.

<table>
<thead>
<tr>
<th>Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could you begin by telling me about how your school got started with the roll out of Common Core?</td>
</tr>
<tr>
<td>2. What activities has the faculty engaged in so far to move forward with implementation?</td>
</tr>
<tr>
<td>3. How would you describe the current level of classroom implementation?</td>
</tr>
<tr>
<td>4. What types of evidences of implementation are you looking for?</td>
</tr>
<tr>
<td>5. Who would you say are the leaders of the process at your school?</td>
</tr>
<tr>
<td>6. How would you describe your role in the implementation process?</td>
</tr>
<tr>
<td>7. How has the district supported implementation?</td>
</tr>
<tr>
<td>8. What would you say are the biggest challenges for implementation?</td>
</tr>
<tr>
<td>9. In your view, what types of resources/activities have been most helpful?</td>
</tr>
<tr>
<td>10. What are the next steps?</td>
</tr>
<tr>
<td>11. At this point, what are the biggest needs for moving forward?</td>
</tr>
<tr>
<td>12. Is there anything else you would like to tell me about your school’s implementation of Common Core – anything I should have asked that I didn’t?</td>
</tr>
</tbody>
</table>

Principal: __________________ School: __________________ District: __________________

Date: ____________ Time: ______________ Location: _______________________

Purpose:
- Collect new data to answer the following research questions:
  1. How do schools respond to large-scale policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
- Triangulate with RttT Coordinator interviews, teacher surveys and focus group data

Introduction
Thank you for agreeing to meet with me again today. At the beginning of this school year, we sat down to discuss your school’s implementation of Common Core Standards. Now at the end of the first semester, I would like to ask you about the progress that has been made since our last discussion.

<table>
<thead>
<tr>
<th><strong>Interview Questions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you describe the current level of classroom implementation? What types of evidences show this?</td>
</tr>
<tr>
<td>2. What recent activities has the faculty engaged in to move forward with implementation?</td>
</tr>
<tr>
<td>3. How are (the leaders identified in the first interview) currently leading the process at your school?</td>
</tr>
<tr>
<td>4. How have you led/supported the process over this first semester?</td>
</tr>
<tr>
<td>5. How has the district supported implementation over this first semester?</td>
</tr>
<tr>
<td>6. A few themes have emerged from the teacher surveys and focus group meetings. Could you elaborate on these themes from your perspective? (Probes for two or three central themes)</td>
</tr>
<tr>
<td>7. At this point, what types of resources/activities would you say have made the process easier? More challenging?</td>
</tr>
<tr>
<td>8. What are the next steps?</td>
</tr>
<tr>
<td>9. At this point, what are the biggest needs for moving forward?</td>
</tr>
<tr>
<td>10. Is there anything else you would like to tell me about your school’s implementation of Common Core – anything I should have asked that I didn’t?</td>
</tr>
</tbody>
</table>
APPENDIX D
RttT Coordinator Interview Protocols

Round 1 – Aug./Sept. 2012

RttT Coordinator: _________________ District: ________________
Date: ____________ Time: ______________ Location: _______________________

Purpose:
• Collect new data to answer research questions:
  1. How do schools respond to large-scale policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
• Triangulate with principal interviews, teacher surveys and focus group data

Introduction
Thank you for agreeing to meet with me today. As you know, I am researching the initial implementation of Common Core State Standards. As part of my dissertation study, I would like to talk to you about your role in leading this change and your perspective on the implementation process.

<table>
<thead>
<tr>
<th>Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could you begin by telling me about how the district got started with the roll out of Common Core?</td>
</tr>
<tr>
<td>2. What activities has the district engaged in so far to move forward with implementation?</td>
</tr>
<tr>
<td>3. How would you describe the current level of implementation in district schools?</td>
</tr>
<tr>
<td>4. What types of evidences of implementation are you looking for?</td>
</tr>
<tr>
<td>5. How would you describe your role in the implementation process?</td>
</tr>
<tr>
<td>6. Other than yourself, who would you say are the key leaders/supporters of the process in your district?</td>
</tr>
<tr>
<td>7. How has the district supported implementation at the school level?</td>
</tr>
<tr>
<td>8. What would you say are the biggest challenges for implementation?</td>
</tr>
<tr>
<td>9. In your view, what types of resources/activities have been most helpful?</td>
</tr>
<tr>
<td>10. What are the next steps?</td>
</tr>
<tr>
<td>11. At this point, what are the biggest needs for moving forward?</td>
</tr>
<tr>
<td>12. Is there anything else you would like to tell me about your district’s implementation of Common Core – anything I should have asked that I didn’t?</td>
</tr>
</tbody>
</table>

RttT Coordinator: _________________ District: ________________
Date: ____________ Time: ______________ Location: _______________________

Purpose:
- Collect new data to answer research questions:
  1. How do schools respond to large-scale policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
- Triangulate with principal interviews, teacher surveys and focus group data

Introduction
Thank you for agreeing to meet with me again today. At the beginning of this school year, we sat down to discuss your district’s implementation of Common Core Standards. Now at the end of the first semester, I would like to ask you about the progress that has been made since our last discussion.

<table>
<thead>
<tr>
<th>Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you describe the current level of implementation across the district?</td>
</tr>
<tr>
<td>What types of evidences show this?</td>
</tr>
<tr>
<td>2. How has the district supported implementation over this first semester?</td>
</tr>
<tr>
<td>3. What recent activities has the district engaged in to move forward with implementation?</td>
</tr>
<tr>
<td>4. How have you led/supported the process over this first semester?</td>
</tr>
<tr>
<td>5. How are (the other leaders identified in the first interview) currently leading/supporting the process?</td>
</tr>
<tr>
<td>6. A few themes have emerged from the data collected from teachers. Could you elaborate on these themes from your perspective? (Probes for two or three central themes)</td>
</tr>
<tr>
<td>7. At this point, what types of resources/activities would you say have made the process easier? More challenging?</td>
</tr>
<tr>
<td>8. What are the next steps?</td>
</tr>
<tr>
<td>9. At this point, what are the biggest needs for moving forward?</td>
</tr>
<tr>
<td>10. Is there anything else you would like to tell me about your district’s implementation of Common Core – anything I should have asked that I didn’t?</td>
</tr>
</tbody>
</table>

Interviewees:                      Date:                       Time:
Grade Levels/Subjects represented: Location:

Focus Group Purpose:
- Generate new data to answer the following research questions:
  1. How do schools respond to large-scale policy change?
  2. How do teachers experience this type of policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
- Triangulate data from interviews and surveys

Script
Thank you for agreeing to meet with me today. As you know, I am researching the initial implementation of Common Core State Standards. As part of my dissertation study, I would like to talk to you about your experiences with this change and your perspectives on the implementation process.

Guidelines:
1. First, there are no right or wrong answers. I am interested in understanding the perspectives and experiences of teachers implementing Common Core.
2. Second, you shouldn’t feel that you have to agree with everyone else in the room if that’s not how you really feel. There are ____ people in this room, and I expect that people will have different views. It’s important that we learn about all of the views represented, but if you find yourself feeling uncomfortable for any reason, you should feel free to leave at any time.
3. Third, I want you to feel comfortable saying both critical and positive and things. I am not here to promote or evaluate any particular way of thinking about Common Core; I just want to learn how each of you are making sense of it.
4. Fourth, I ask that we talk one at a time so that we can hear everyone and I can be sure to get everyone’s views.
5. Fifth, when you speak, please say your name first – you may use a pseudonym - so that when the audio is transcribed, I can tell who is speaking. You could say, “This is Molly.” or “This is Jennifer speaking.”

(adapted from Bogdan, C. & Biklin, S., 2007, p. 110)
I have developed a series of preliminary questions to get us started, but I’d like for the group to determine where we go from there.

<table>
<thead>
<tr>
<th>Focus Group Discussion Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could we start with each of you telling how long have you been working at ### school? In your grade level/subject area?</td>
</tr>
<tr>
<td>2. Can you tell about how you first became aware of the shift to Common Core?</td>
</tr>
<tr>
<td>3. How would you describe your current level of implementation? Is this similar/different from the rest of your grade level/team?</td>
</tr>
</tbody>
</table>
| 4. A few themes emerged from the first teacher survey. Could you elaborate on these themes? How do they match/not match your experience?  
  a. One theme was ____________. (follow-up probes for elaboration)  
  b. A second theme was ______________. (follow-up probes for elaboration)  
  c. An additional theme was ____________. (follow-up probes for elaboration) |

<table>
<thead>
<tr>
<th>Interviewees:</th>
<th>Date:</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Levels/Subjects represented:</td>
<td>Location:</td>
<td></td>
</tr>
</tbody>
</table>

Focus Group Purpose:
- Generate new data to answer the following research questions:
  1. How do schools respond to large-scale policy change?
  2. How do teachers experience this type of policy change?
  3. How do contextual factors shape organizational learning in schools during the implementation of a new policy?
- Triangulate data from previous focus group meeting, interviews and surveys

Script
Thank you for agreeing to meet with me again today. When we last met, you were just beginning the semester implementing the Common Core Standards. Today, I would like to follow-up with you on your experiences during this initial implementation. (Review guidelines from first meeting.)

As with our last meeting, I have a few prepared questions to get us started, but I would like for the group to determine where we go from there.

<table>
<thead>
<tr>
<th>Focus Group Discussion Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Let’s begin with each of you describing your current level of implementation. Is it similar/different from the rest of your grade level/team?</td>
</tr>
</tbody>
</table>
| 2. A few themes emerged from the teacher surveys. Could you elaborate on these themes? How do they match/not match your experience?  
  a. One theme was ____________. (follow-up probes for elaboration)  
  b. A second theme was ____________. (follow-up probes for elaboration)  
  c. An additional theme was ____________. (follow-up probes for elaboration) |
| 3. Is there anything else you would like to tell me about your school’s implementation of Common Core – anything I should have asked that I didn’t? |
APPENDIX F
List of Documents Examined

- North Carolina DPI Race to the Top Plan
- District Race to the Top Plans
- Group emails forwarded from principals
- District web sites
- School web sites
- Professional development agendas and other materials
APPENDIX G
Informed Consent Form for Research Principals

Title of Study: Understanding Common Core Implementation

Principal Investigator: Rachel Porter  Faculty Sponsor: Dr. Bonnie Fusarelli

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?
The purpose of the study is to explore the ways educators at the school level experience the federally directed curriculum policy change to Common Core State Standards, and to examine the contextual factors that impact initial implementation.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to:

- Allow me to interview you twice during the period of the study. I will interview you once at the beginning of the school year, and again at the end of the first semester. Each interview should last approximately one half hour.

- Allow me to review school documents such as memos, meeting and training agendas, newsletters, and school planning documents,

- Include me in group emails sent to faculty regarding Common Core State Standards.

- All research will take place at your school site unless there is an off-campus location that will be more convenient for you to participate in the interviews.
Risks
The risks to you are minimal. Potentially, you might be uncomfortable with me as a researcher, but I will do whatever necessary to remain unobtrusive. I will honor your requests if you need for me to excuse myself from activities or conversations you consider to be highly confidential.

Benefits
The benefits of this study to you are indirect. For example, through the interviews you might gain additional insight into your school’s challenges and experiences implementing Common Core State Standards.

The primary potential benefits for your participation is adding to the body of knowledge by documenting the experiences of a school implementing the Common Core State Standards for the first time.

Confidentiality
The information in the study records will be kept strictly confidential. Data will be stored securely on a password-protected laptop computer that will remain in my possession at all times. No reference will be made in oral or written reports which could link you to the study. Any pertinent information provided in an email will be extracted from the email and the email will be deleted. You will NOT be asked to provide your name on any study materials so that no one can match your identity to the answers that you provide. After the study is completed, all information including written, audio and video taped, transcribed, and electronic will be destroyed.

Compensation
You will not receive any compensation for participating.

What if you have questions about this study?
If you have questions at any time about the study or the procedures, you may contact the researcher.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, IRB Administrator, Box 7514, NCSU Campus (919/515-4514) debra_paxton@ncsu.edu, or Carol Mickelson, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515) carol_mickelson@ncsu.edu.

Consent to Participate
—I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time.
Subject’s signature_____________________________________ Date ________________
Investigator's signature_________________________________ Date ________________
APPENDIX H
Informed Consent Form for Research Teachers – Focus Group Members

Title of Study: Understanding Common Core Implementation

Principal Investigator: Rachel Porter          Faculty Sponsor: Dr. Bonnie Fusarelli

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?
The purpose of the study is to explore the ways educators at the school level experience the federally directed curriculum policy change to Common Core State Standards, and to examine the contextual factors that impact initial implementation.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to participate in a focus group that will meet twice over the course of the study. The first meeting will be convened at the beginning of the 2012-13 school year and the second meeting will be held near the end of the first semester. Additionally, after the focus group, you or I might want to have a private follow-up conversation (in person or electronically) about information discovered in the focus group setting. You will be one of a group of teachers (5-7) from your school that are invited to participate in the focus group for this study. I anticipate that focus group meetings will not last more than 1 hour each, taking a total of about 2 hours of your time. The purpose of the initial focus group is to determine your experiences and opinions of how the faculty is beginning to implement the new Common Core State Standards. The second focus group meeting will be held to revisit your experiences and discuss any changes in context and opinions over the first semester. All research will take place at your school site.

Risks
The risks to you are minimal. You will be able to review the transcripts of the focus group meetings for the purpose of clarifying and refining your comments. The transcripts will be either delivered to you in person or will be sent in hard copy via US mail.
Benefits
The benefits of this study to you are indirect. You might gain greater insight into your school’s and/or your own professional practice. The primary potential benefits for your participation is adding to the body of knowledge by documenting the experiences of a school implementing the Common Core State Standards for the first time.

Confidentiality
The information in the study records will be kept strictly confidential, but total confidentiality cannot be assured due to the members possibly discussing what was said in the group outside of the group. *However, it is important to understand that information from the group discussion must be kept confidential.* Data will be stored securely on a password-protected lap top computer that will remain in my possession at all times. No reference will be made in oral or written reports which could link you to the study. Any pertinent information provided in an email will be extracted from the email and the email will be deleted. You will NOT be asked to provide your name on any study materials so that no one can match your identity to the answers that you provide. After the study is completed, all information including written, audio and video taped, transcribed, and electronic will be destroyed.

Compensation
You will not receive any compensation for participating.

What if you have questions about this study?
If you have questions at any time about the study or the procedures, you may contact the researcher.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, IRB Administrator, Box 7514, NCSU Campus (919/515-4514) debra_paxton@ncsu.edu, or Carol Mickelson, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515) carol_mickelson@ncsu.edu.

Consent to Participate
—I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time.

Subject's signature_____________________________________ Date ____________
Investigator's signature____________________________________ Date ____________
APPENDIX I
Informed Consent Form for Research Teachers – Survey Respondents

Title of Study: Understanding Common Core Implementation

Principal Investigator: Rachel Porter  Faculty Sponsor: Dr. Bonnie Fusarelli

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?
The purpose of the study is to explore the ways educators at the school level experience the federally directed curriculum policy change to Common Core State Standards, and to examine the contextual factors that impact initial implementation.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to complete three online surveys. Each survey will be delivered via email link and will be spread out at least six weeks apart over the first semester of the 2012-2013 school year. I anticipate that the surveys should not take more than twenty minutes each to complete, taking a total of about 1 hour of your time. The purpose of the surveys is to determine your experiences and opinions of how the faculty is beginning to implement the new Common Core State Standards.

Risks
The risks to you are minimal. None of the surveys contain items that ask for personal information that could identify individual respondents. You will be able to review the combined survey results at the conclusion of the study. Summary reports will be delivered to all participating faculty via email.

Benefits
The benefits of this study to you are indirect. Through reflecting upon the survey items, you might gain greater insight into your school’s and/or your own professional practice. The primary potential benefits for your participation is adding to the body of knowledge by
documenting the experiences of a school implementing the Common Core State Standards for the first time.

**Confidentiality**
The information in the study records will be kept strictly confidential. Survey results will be collected via a secure online survey engine. Data will be stored securely on a password-protected laptop computer that will remain in my possession at all times. No reference will be made in oral or written reports which could link you to the study. Any pertinent information provided in an email will be extracted from the email and the email will be deleted. You will NOT be asked to provide your name on any study materials so that no one can match your identity to the answers that you provide. After the study is completed, all information including written, audio and video taped, transcribed, and electronic will be destroyed.

**Compensation**
You will not receive any compensation for participating.

**What if you have questions about this study?**
If you have questions at any time about the study or the procedures, you may contact the researcher.

**What if you have questions about your rights as a research participant?**
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, IRB Administrator, Box 7514, NCSU Campus (919/515-4514) debra_paxton@ncsu.edu, or Carol Mickelson, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515) carol_mickelson@ncsu.edu.

**Consent to Participate**
I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time.

If you agree to participate, please click the link below to go to the survey.
APPENDIX J
Informed Consent Form for Research District Coordinators

Title of Study: Understanding Common Core Implementation

Principal Investigator: Rachel Porter          Faculty Sponsor: Dr. Bonnie Fusarelli

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?
The purpose of the study is to explore the ways educators at the school level experience the federally directed curriculum policy change to Common Core State Standards, and to examine the contextual factors that impact initial implementation.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to:

- Allow me to interview you twice during the period of the study. I will interview you once at the beginning of the school year, and again at the end of the first semester. Each interview should last approximately one half hour.

- Allow me to review district documents such as memos, meeting and training agendas, and planning documents related to implementation of the Common Core State Standards.

- Interviews will take place at your office unless there is an alternate location that will be more convenient for you.

Risks
The risks to you are minimal. I will honor your requests if you are unable to share some information you might consider confidential.
Benefits
The primary potential benefits for your participation is adding to the body of knowledge by documenting the experiences of a school implementing the Common Core State Standards for the first time.

Confidentiality
The information in the study records will be kept strictly confidential. Data will be stored securely on a password-protected laptop computer that will remain in my possession at all times. No reference will be made in oral or written reports which could link you to the study. Any pertinent information provided in an email will be extracted from the email and the email will be deleted. You will NOT be asked to provide your name on any study materials so that no one can match your identity to the answers that you provide. After the study is completed, all information including written, audio and video taped, transcribed, and electronic will be destroyed.

Compensation
You will not receive any compensation for participating.

What if you have questions about this study?
If you have questions at any time about the study or the procedures, you may contact the researcher.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, IRB Administrator, Box 7514, NCSU Campus (919/515-4514) debra_paxton@ncsu.edu, or Carol Mickelson, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515) carol_mickelson@ncsu.edu.

Consent to Participate
—I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time.

Subject's signature_____________________________________ Date ______________
Investigator's signature_____________________________________ Date ______________
APPENDIX K
Letter to Principals Inviting School Participation

May 25, 2012

Hello (Name of principal),

I am writing to request your assistance with research I am conducting for my doctoral dissertation at North Carolina State University. As part of the requirements for completion of my degree, I am conducting research on the topic of initial Common Core implementation in North Carolina elementary schools. After reviewing county data, I identified your school as a possible participant in my research.

Upon university approval, the project will begin in August, with the majority of the research taking place during the first semester of next school year. I am very interested in speaking with you to learn more about your school and how your teachers have begun implementing Common Core standards. Additionally, I would like to survey your faculty and meet with at least five teachers from your school to learn about their initial implementation experiences. The study, as designed, should only require a couple of hours total of participating teachers’ time and would provide opportunities for the school to use the collected data in future decision-making.

If you think you might be interested in having your school participate in my study, I can contact you by phone to share more details and answer questions about the project. If you grant me permission to include your school in the study, we can then set up a face-to-face meeting before the end of this school year to further discuss particulars.

Thank you in advance for your consideration.

Sincerely,

Rachel Porter