An Examination of How Middle School Principals Make Sense of Their Role in Leading Standards Based Educational Reform

Barbara J. Maling CAS, MA
Muskie School of Public Service, University of Southern Maine, barbara.maling@maine.edu

Follow this and additional works at: https://digitalcommons.usm.maine.edu/muskie-dissertations

Part of the Educational Administration and Supervision Commons, Educational Assessment, Evaluation, and Research Commons, Educational Leadership Commons, Educational Methods Commons, Education Policy Commons, and the Junior High, Intermediate, Middle School Education and Teaching Commons

Recommended Citation
https://digitalcommons.usm.maine.edu/muskie-dissertations/2

This Dissertation is brought to you for free and open access by the Student Scholarship at USM Digital Commons. It has been accepted for inclusion in Muskie School Dissertations by an authorized administrator of USM Digital Commons. For more information, please contact jessica.c.hovey@maine.edu.
An Examination of How Middle School Principals Make Sense of their Role in Leading Standards-Based Educational Reform

By

Barbara J. Maling

Sc.B. Brown University, 1986
M.A. University of Colorado, Boulder, 1990
C.A.S. University of Southern Maine, 2007

A DISSERTATION
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Public Policy

University of Southern Maine
May 2019

Advisory Committee:
Catherine Fallona, Professor, Education and Human Development, Advisor
Andrea Stairs-Davenport, Associate Professor, Education and Human Development
Kathryn Hawes, Superintendent, Regional School Unit #21, Maine
LIBRARY RIGHTS STATEMENT

In presenting this dissertation in partial fulfillment of the requirements for an advanced degree at the University of Southern Maine, I agree that the Library shall make it freely available for inspection. I further agree that permission for "fair use" copying on this thesis for scholarly purposes may be granted by the Librarian. It is understood that any copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Signature: [Signature]

Date: 4/15/19
An Examination of How Middle School Principals Make Sense of their Role in Leading Standards-Based Educational Reform

By

Barbara J. Maling

Sc.B. Brown University, 1986
M.A. University of Colorado, Boulder, 1990
C.A.S. University of Southern Maine, 2007

Approved by:

Catherine Fallona, Chair

Andrea Stairs-Davenport, Member

Kathryn Hawes, Member
AN EXAMINATION OF HOW MIDDLE SCHOOL PRINCIPALS MAKE SENSE OF THEIR ROLE IN LEADING STANDARDS-BASED EDUCATIONAL REFORM

By Barbara J. Maling, M.A., C.A.S.

Dissertation Advisor: Dr. Catherine Fallona

An Abstract of the Dissertation Presented
In Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in Public Policy May 2019

A dominant feature of the educational policy landscape has been the adoption and use of learning standards to design classroom instruction. As these efforts move forward, often without clear definition of the classroom practices that should be adopted, the role of the school principal is critical in interpreting the changes, and charting a course for the teachers in the building. This qualitative study, examines the sensemaking of four active middle school principals as they interpreted and led standards-based reform efforts in their buildings, using a novel theoretical framework based on prior research (Benford & Snow, 2000; Spillane, Reiser, & Reimer, 2002). In addition, the study sought to illuminate how the forces of the principal’s belief in the value of the standards-based education and their accountability to the district and state to create change affected their leadership practice in the school.

Key findings demonstrated that the variation in language related to standards-based practices posed challenges for principals, and that principals made robust efforts to mediate the collective sensemaking of the practitioners in their buildings, as well the individual teacher sensemaking of the new practices. In the study principals hewed to the unique context of their school when determining what elements of standards-based practices to adopt. Other findings support the idea that a principal’s belief in the reform efforts is a substantially stronger influence on their leadership priorities than a sense of accountability.

This indicates that reform efforts should focus on careful consideration of the language used to describe the practices; they should account for resources available in schools, and provide reasonable, coherent next steps for educators. A crucial component in national and state educational policy changes designed to improve instruction and student learning is the need to understand how school administrators interpret standards-based educational practices, and how their interpretations are reflected in their school leadership practices.
ACKNOWLEDGEMENTS

I would like to thank Dr. Catherine Fallona for her intellectual support and straightforward, goal-setting attitude that helped keep me motivated and on track to complete this program while juggling a challenging work life as a principal. My committee members Dr. Andrea Stairs-Davenport and Dr. Katie Hawes formed the rest of my A-team, and provided a terrific balance between promoting robust scholarship and just-get-it-done. My cohort members provided an endless supply of Twizzlers and encouragement, as well as many days and evenings of stimulating discussion, which helped our journey be one of community and friendship.

My deepest gratitude is reserved for my husband and sons, who are my biggest cheerleaders. Their unwavering support made what seemed impossible at times actually possible. They make me laugh, and are a constant source of light in my life.
# Table of Contents

Chapter 1 Introduction............................................................................................................................ 1  
  Introduction to Research Problem........................................................................................................ 1  
  Purpose ............................................................................................................................................. 7  
  Research Questions ............................................................................................................................. 8  
  Significance ....................................................................................................................................... 9  

Chapter 2 Literature Review................................................................................................................ 11  
  Introduction - Situating the Literature ................................................................................................. 11  
  Standards-Based Reform ..................................................................................................................... 13  
  Principal Leadership Research .......................................................................................................... 30  
  Sensemaking Theory Research .......................................................................................................... 36  
  Overall Summary and Appropriateness of Literature Review .......................................................... 42  

Chapter 3 Methodology........................................................................................................................... 43  
  Introduction ....................................................................................................................................... 43  
  Methodological Overview ..................................................................................................................... 45  
  Selection and Sampling Strategies ....................................................................................................... 47  
  Theoretical Framework ....................................................................................................................... 50  
  Data Gathering Procedures .................................................................................................................. 53  
  Data Analysis Process .......................................................................................................................... 55  
  Limitations and Delimitations of the Study .......................................................................................... 56  
  Role of the Researcher/Trustworthiness ............................................................................................. 57  
  Risk, Protection and Confidentiality .................................................................................................... 58  

Chapter 4 Review of the Findings ....................................................................................................... 60  
  Introduction ....................................................................................................................................... 60  
  Making Sense of Leading Standards-Based Educational Change ..................................................... 63  
  Impact of Accountability on Principal Leadership ............................................................................. 117  
  Overall Summary of Findings by Research Question ....................................................................... 130  

Chapter 5 Discussion, Recommendations, Conclusions .................................................................. 141  
  Discussion of Key Findings ................................................................................................................ 142  
  Principal Efforts to Mediate Sensemaking for Teachers .................................................................... 144  
  Context Matters in Leadership Decisions .......................................................................................... 146  
  Influence of Belief in Principal Leadership ....................................................................................... 147  
  Influence of Accountability in Principal Leadership ......................................................................... 147  
  Recommendations for Policy Improvement ....................................................................................... 149  
  Recommendations for Further Research ............................................................................................ 153  
  Conclusion ......................................................................................................................................... 155
Chapter 1 Introduction

Introduction to Research Problem

A dominant feature of the educational policy landscape in the past three decades has been the adoption and use of learning standards to design classroom instruction, most recently the Common Core State Standards (CCSS) for Math and English Language Arts. Because these standards exist in a complicated mix of policy, politics, practice, and research, it has been difficult to definitively associate positive changes in student outcomes, especially increases in student achievement, with this reform effort. In addition, the role of school administrators has, over the past two decades, shifted to being increasingly focused on instructional leadership, and school principals in particular are expected to provide a vision and direction to reform efforts in their buildings. As these efforts move forward, often without clear definition of the classroom practices that should be adopted, grading practices that may be changed, or school-wide models to examine for best practices, the school principal plays a critical role interpreting the expected changes, and charting a course for the teachers in the building to follow as they shift to this new model of instruction. Understanding how school administrators interpret standards-based educational practices, and how their interpretations are reflected in their school leadership practices, is crucial to better understanding how policy is translated to classroom practice.

Context - standards-based reform history and research. Although the roots of standards-based reform efforts can be found in the 1980s, the full flowering of the standards movement continued with subsequent federal administrations over the past 30
years, with the most vigorous progress occurring between the 2001 passage of the “No Child Left Behind (NCLB) act, and the 2010 release of the CCSS. More than just a set of standards, the CCSS were designed to articulate a vision of what a literate and numerate student should know and be able to do at each grade level, and ultimately by high school graduation. Bomer and Maloch (2011), shortly after the release of the standards, noted that:

The adoption of these standards has brought about the most sweeping nationalization of the K-12 curriculum in US history. In raw terms of what gets taught in American schools, no single national policy event has ever had as much significance as the adoption of these standards. (p. 38)

Researchers have explored the relationship of the implementation of the CCSS to student learning outcomes, undertaking different approaches to understand whether or not this reform effort is successful at improving learning outcomes for students. Researchers have approached the complicated and widespread policy from many angles. They have looked at policy implementation from a system viewpoint, attempting to clarify and quantify how interacting elements of the reform efforts combine most effectively. They have examined instructional change from the teacher perspective, and have used student achievement data to identify a positive impact of standards-based reform.

Some large scale synthesis studies, focused on identifying impacts from standards-based approaches on a broad range of student learning outcomes, including student achievement, found positive associations with standards-based practices (Guskey & Pigott, 1988; Kulik, Kulik, & Bangert-Drowns, 1990; Lauer et al., 2005). Another large quantitative study tried to tie the degree to which a coherent, state articulated
standards-based reform policy affected student achievement outcomes and classroom instruction, finding that state policy activity had a significant effect on teacher’s use of standards-based instruction (Swanson & Stevenson, 2002). One study found a weak association with alignment to standards and student achievement gains by looking at student achievement on standards-aligned assessments, and characterizing the degree to which their teachers’ instructional practice was grounded in a strong alignment to standards (Polikoff & Porter, 2014). One final larger scale implementation study that examined student achievement outcomes found statistically significant positive outcomes in schools that had a coherent standards-based vision and strong leadership (Haystead, 2010). This raises the question of the role of fidelity to a model (alignment) and role of authority (accountability) in standards-based implementation, a thread that this study explored in relation to the perspectives of the participating principals.

Smaller scale, qualitative research has had more success developing findings about positive student learning outcomes in a narrow window of standards-based education. Some researchers have focused on the experience of the teacher, recognizing that teacher is the key element in whether large scale reform efforts will be realized in the classroom. Sullivan (2015) found that teachers and students reported more engagement and higher rigor during a shift to standards-based practices. In another comparative case study, Porter, Fusarelli and Fusarelli (2014) found that the change to the CCSS had a strong impact on teacher’s professional and personal lives, and highlighted the importance of both the context of the implementation and the role of the district leadership in influencing the change. Clearly the challenges of successfully implementing a complex policy at a state, or even local level are daunting, and the
challenge of determining through research what works in the policy to improve student
achievement is even more daunting. However, research has painted a picture of the
importance of a coherent, aligned system with accountability measures in place, with
enough glimpses of positive outcomes in research to support the idea that standards-based
reform efforts are worth continuing.

**Context - principal leadership.** Although there has been a constant evolution of
principal leadership models, not in question is the recognition that that effective principal
leadership has a significant influence on school success (Day, Gu, & Sammons, 2016;
Leithwood, Harris, & Hopkins, 2008; Marzano, Waters, & McNulty, 2005; Waters,
Marzano, & McNulty, 2003). School principals “exert leadership through constellations
of actions that coalesce around different ‘models’ of leadership, including
transformational, instructional, moral, or participative leadership” (Leithwood & Riehl,
2003, p. 23), and the most effective principals focus on setting direction and vision,
developing teachers, and developing school organizational function (Leithwood & Riehl,
2003). In addition, researchers who have examined the principal’s role in enacting school
reform have identified the principal as a key lever for moving the work forward (Bryk,
2010; Hallinger & Heck, 1998; Supovitz, Sirinides, & May, 2009), an important aspect
that was considered for this study, as it focused on the implementation of standards-based
reform.

As the promise of standards-based reform is to increase student achievement and
engagement through the improvement of instructional practices, looking at principal
leadership through the lens of instructional leadership is useful. Researchers have found
that principals who integrate transformational leadership approaches with instructional
leadership approaches can shape improvements in student learning (Day et al., 2016; Pietsch & Tulowitzki, 2017). Other international researchers have highlighted the importance of understanding the context that shapes the school leadership environment, which seems particularly valuable when considering the school leaders' response when faced with implementing a novel educational reform initiative, such as standards-based education (Hallinger, 2016; Noman, Awang Hashim, & Shaik Abdullah, 2016; Osborn, Hunt, & Jauch, 2002).

**Context - standards-based reform in Maine.** Maine, the region of this study, was in the process, since the passage of LD 1422, *An Act to Prepare Maine People for the Future Economy* in 2012, of awarding high school diplomas based on demonstrated proficiency of the Maine Learning Results standards. This represented an effort to improve learning outcomes for Maine students through a policy that tied together two streams of educational reform - the implementation of learning standards, and the belief in accountability measures. High schools in Maine were charged with redesigning their high school graduation pathways to award a proficiency-based diploma, starting with the class of 2021. Work began in earnest across the state of Maine in 2012, and many districts had extended their reform efforts across the grade levels, intent on designing a support system at the middle and elementary school grades that could support the diploma plan at the high school level. In July 2018, with the passage of LD 1666, *An Act to Ensure the Successful Implementation of Proficiency-based Diplomas*, which is essentially a partial repeal of the law, districts were allowed to choose a proficiency diploma system or a traditional system (Kornfield, 2018). This provided a more complex
landscape for the study, as principals in the study considered how this shift in educational policy would impact their school practices.

Despite the current status of Maine reform efforts, research focused on the success of this initiative occurred regularly over the course of a number of years of implementation. The Maine Education Policy Research Institute (MEPRI) undertook an annual series of research reports to assess the ongoing implementation of the proficiency-based diploma law, using a case study format (Silvernail, 2013; Silvernail, Stump, & Hawes, 2014; Silvernail, Stump, McCafferty, & Hawes, 2014; Stump, Doykos, & Fallona, 2016). Findings indicated that although schools were making good-faith implementation efforts, troubling variations in practice and other inconsistencies were widespread. Maine’s experience with realizing a complicated proficiency-based education policy highlights the challenges researchers have had in drawing a clear line between standards-based education and improving student learning outcomes.

Implementation research, especially on a larger scale, is difficult due to the messy nature of school-based change. However, there appear to be areas where research can still have a role in teasing out effective standards-based practices, particularly with an examination of the role of building principals in interpreting and leading standards-based reform, the focus of this study.

In examining the role of the principal in the context of standards-based reform, particularly in the state of Maine, which has been in an active implementation process, this study built on the research about both instructional leadership, focused on improving student learning, and contextual leadership, focused on responding to the unique dynamics of the school and district. By narrowing the focus to how principals sought to
respond and lead standards-based change efforts in their own schools and districts, this study provided insights into the leadership behavior of principals in their own unique school context. To glean more specific findings in the complex world of school leadership, this study developed a unique theoretical framework, which will be clarified in Chapter 3. This theoretical framework will help further highlight the specific contextual factors, from principal beliefs to district expectations, that influence school leaders as they make leadership decisions in a standards-based education reform milieu which does not provide a clear leadership pathway from education policy to changes at the classroom level.

Purpose

The purpose of this study was to describe and analyze how middle school administrators make sense of their role in leading the adoption of standards-based educational practices in their schools. I applied a framework of alignment of belief in the value of standards-based education versus the accountability administrators felt from the district/state to lead the change to standards-based education, in an effort to identify how these forces influence the leadership choices made by principals. My research was grounded in the theory of sensemaking (Weick, 1995, 2000). This research explored how educators interpret new educational policies and ideas through their own mental models, and how the fidelity of implementation of a policy was likely determined by these deeply held perceptions of their role in the change process. Interviews were structured with a particular focus on a three stage sensemaking framework for education of individual cognition, situated cognition, and the role of representation (Spillane, Reiser, & Reimer, 2002). In addition to using sensemaking theory, I used a frame analysis approach to
create a unique framework that attempted to further clarify the forces that were acting upon the interviewees leadership decisions and actions. Drawing from the research tradition of frame analysis in school policy implementation (Benford & Snow, 2000; Snow & Benford, 1988), and state level policy implementation work (Coburn, Hill, & Spillane, 2016), I considered the alignment of belief and sense of accountability as elements of principal sensemaking around standards-based reform leadership. Using them as elements of a frame analysis approach as evoked by Benford and Snow (2000), my study investigated the role they played in middle school principal sensemaking. Through this comparative case study approach, my study examined the beliefs and interpretations of four middle school principals in Maine, in varying stages of making the shift to a standards-based educational model, as they led their buildings in response to new educational policy.

**Research Questions**

This study sought to deepen understanding of how middle school administrators operate in a changing climate of standards-based educational reform. Specifically, the study sought to answer two questions:

- How do middle school principals make sense of their role in leading standards-based educational change?
- How do the forces of
  - their belief in the value of the standards-based education and
  - their accountability to the district and state to create change, affect their leadership practice in the school?
Exploring how middle school leaders are affected by the forces of belief and accountability was an explicit decision, and is described in more detail in Chapter 3, as the theoretical framework is unpacked.

**Significance**

Through the review of the literature, I will make the case that standards-based reform is a widespread and influential reform effort that holds the promise of improving student learning. The role of the principal as a significant driver of how reform initiatives unfold in schools is firmly established in the research and is examined in the review of literature. If a school principal is a key player in leading standards-based reform efforts, it seems important to illuminate the sensemaking that drives the leadership choices that he or she makes, particularly as it relates to the alignment of her beliefs to standards-based reform, as well as the pressure he may feel from the district to accomplish change. There is a body of research around principal sensemaking in a reform environment, but there was not a study that specifically examined middle school principal sensemaking of standards-based reform.

Execution of education policy has been shown over many years to be a complicated and messy business, with understanding and action filtered through a myriad of lenses, from superintendents to principals to teachers themselves. Most often, the end result that students experience in the classroom is worlds apart from what the policy makers envisioned. This study will contribute in a small way to helping policy-makers design implementation strategies to complement policies, helping ensure that good ideas and plans for education find their way with fidelity into the classroom instruction. This study informs a gap in the research, and adds to understanding of effective educational
policy implementation by focusing specifically on how middle school principals make sense of their role in leading standards-based reform efforts in their schools,
Chapter 2 Literature Review

Introduction - Situating the Literature

To situate this research study on how middle school principals make sense of leading standards-based education efforts in the landscape of educational reform, as well as establish the importance of the role of the principal in leading teachers to shift classroom practice, this literature review will explore the thinking and research in three different areas related to the study. First, I will review a brief history of the standards-based reform efforts, both nationally and in the study region of Maine, to highlight the significance of these reform efforts, and the impact that they have on the instruction that is delivered in classrooms across the United States. Essentially, I will make the case in this section that standards-based reform is a well-established, influential driver of classroom instruction, with a body of research exploring its effectiveness. Yet, there is little consistency and cohesion in the models that exist, making the interpretation of standards-based education reform by school principals of particular importance in terms of school-based leadership.

The second area of literature review will focus on the role of the principal in leading reform efforts in schools. In this section, the evolution of the role of the principal will be explored, including research that highlights the important influence of the principal on enacting school success, particularly with changing classroom instruction. Particular attention will be paid to the research and thinking around instructional leadership as a model, as the essence of standards-based reform is to increase student achievement within a common set of learning expectations, which requires principals to operate successfully in this arena. This section will conclude with a review of the
evolving idea of contextual leadership, which examines how the unique milieu of a school, and a principal's ability to adapt to and operate within this milieu, deeply affects his or her effectiveness as a leader. Because standards-based reform efforts are context dependent, and this study looked closely at two contextual factors influencing a principal - a sense of belief (alignment) in the reform and a sense of district accountability (authority) - a review of research in this area is important.

Finally, after establishing that standards-based reform is a significant influence on schools, and that principals have a significant influence on the classroom practices that are prioritized in a school, I will explore the cognitive processes by which principals interpret this new information and make leadership decisions. Research focused on sensemaking theory, a multi-dimensional understanding of the forces that shape how the "actors" - teachers and administrators - respond in novel situations, will be reviewed to establish it as one valid and appropriate framework for the study. Frame analysis will also be reviewed as an approach that can integrate with and inform sensemaking theory, to better focus results on specific study elements.

With this particular trace of the history of standards, the leadership role of principals, and the importance of individual cognition as a driver of leadership choices, I will lay the foundation to understand how these three areas of scholarship can be bridged to address the research questions I posed. In addition, I will make the case for how this study informed a gap in the research, by solidifying that although there has been research in all three areas, there had not been a study that specifically examined how middle school principals made sense of their role in leading standards-based reform efforts in their schools.
Standards-Based Reform

History of standards-based reform policy. The Common Core State Standards (CCSS), released by the Council of Chief State School Officers in 2010, are the latest and most widespread effort at establishing common learning standards across the nation. Developed by a private contractor, the CCSS represented the culmination of standards-based reform efforts that had been underway since the early 1980s, spurred by the release of *A Nation at Risk: The Imperative for Educational Reform* in 1983. Painting a bleak portrait of American schools, the report was a brief and powerful indictment of the purported decline of American schools compared to global counterparts. The report recommended higher standards, high stakes testing, longer school days and years, more highly qualified and compensated teachers, and a call for the federal government to monitor the progress of various subgroups of students, including students in poverty, and students with disabilities. From this, a new era of school reform was born that introduced elements of privatization in the form of charter schools and vouchers, with an emphasis on defining standards of student performance to be addressed in schools, and an increasing expectation that schools be held accountable for increasing student achievement. Although the roots of these reform efforts can be found in the 1980’s, the full flowering of the standards movement has continued under subsequent federal administrations, both Republican and Democrat, over the past 30 years, with the most vigorous progress occurring between the 2001 passage of the “No Child Left Behind (NCLB) act, and the 2010 release of the CCSS.

The actual development of the CCSS standards happened quickly, starting in 2009. The standards were purported to be developed “backwards”, from a set of high school graduation expectations that were then scaffolded back to a set of expectations for
kindergarteners. The creators placed an emphasis on creating a coherent set of learning outcomes that emphasized critical thinking and 21st century skills, representing more curricular depth than overall breadth. More than just a set of standards, the CCSS were designed to articulate a vision of what a literate and numerate student should know and be able to do at each grade level, and ultimately by high school graduation. Interest in and adoption of the standards by education departments at the state level moved forward quickly. As noted in Chapter 1, Bomer and Maloch (2011), shortly after the release of the standards, stated that the “the adoption of these standards has brought about the most sweeping nationalization of the K-12 curriculum in US history. In raw terms of what gets taught in American schools, no single national policy event has ever had as much significance as the adoption of these standards” (p. 38).

The release of the CCSS standards, and the subsequent call for state-level adoption, created a wave of state and national policies, developed in response to an effort to either accept or reject the CCSS standards. Researchers have explored the relationship of the implementation of the CCSS to student learning outcomes, undertaking different approaches to understand whether or not this reform effort works to improve learning outcomes for students. Approaches include looking at policy implementation from a system viewpoint, attempting to clarify and quantify how interacting elements of the reform efforts combine most effectively. Researchers have also examined instructional change from the teacher perspective, and have used student achievement data to identify a positive impact of standards-based reform.

**Standards-based education definition.** Before attempting to examine specific research to find common themes and threads, it is important to recognize that there is not
one universal, commonly understood definition of standards-based education. Most would agree that the instructional practice needs to be grounded in a common set of learning standards, most commonly the CCSS. Beyond necessitating the identification of learning standards, the definition of standards-based education (SBE) becomes more diffuse. In general, there is also a belief that it is an integrated system of standards, instruction and assessment that measures student progress towards mastery of the common set of learning standards.

According the Glossary of Educational Reform by consulting firm Great Schools Partnership, “the term standards-based refers to systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating understanding or mastery of the knowledge and skills they are expected to learn as they progress through their education” (Partnership, 2014). More recently, the term proficiency-based learning has come into use, particularly in New England states. In Maine, with the May 2012 passage of LD 1422, An Act to Prepare Maine People for the Future Economy, high school diplomas were to be awarded based on demonstrated proficiency of the Maine Learning Results standards. Great Schools Partnership, in their website resources, noted that:

Defining proficiency-based learning is complicated by the fact that educators not only use a wide variety of terms for the general approach, but the terms may or may not be used synonymously from place to place. A few of the more common synonyms include competency-based, mastery-based, outcome-based, performance-based, and standards-based education, instruction, and learning, among others. (Partnership, 2013)
Researchers from the Regional Educational Laboratory Northeast and Islands Region, have characterized competency-based learning, essentially a form of SBE, as including four elements:

1. Students must demonstrate mastery of all required competencies to earn credit or graduate.
2. Students advance once they have demonstrated mastery, and students receive more time, and possibly personalized instruction, to demonstrate mastery if needed.
3. Students are assessed using multiple measures to determine mastery, usually requiring that students apply their knowledge, not just repeat facts.
4. Students can earn credit toward graduation in ways other than seat time, including apprenticeships, blended learning, dual enrollment, career and technical education programs, and other learning opportunities outside the traditional classroom setting (Torres, Brett, & Cox, 2015, p. 3).

These varied definitions and terms highlight the complexity of exploring research related to SBE. Any one of the elements of the system can have a body of research, yet they are all interacting simultaneously, on a large and small scale, both across states and in classrooms. For the purposes of this study, I will use the term standards-based education, but it can be considered synonymous with proficiency-based or competency-based education, generally including the four elements listed above.

**Large scale standards-based reform implementation research.** Undertaking standards-based reform implementation research has been found to be extremely challenging. Early researchers were dealing with either an incomplete system, at the
larger level of district, state and nation, or were looking at such a small piece of the puzzle that their results were not generalizable to the question of whether standards-based learning was effective. Researchers have struggled to tie increased student achievement to these incomplete and unevenly implemented systems. There is still not a common understanding of the parameters and characteristics that define standards-based education. The adoption of the Common Core State Standards reduced the variability in the standards assessed, and a body of meta-analysis research has been developed that identifies classroom practices that increase student achievement. For the purposes of this study, I will pay particular focus to large-scale, meta-analytic studies that attempt to quantify an impact on student achievement. They will be the most informative to establishing connection between standards-based education, student learning and the instructional leadership provided by school principals to lead reform efforts. I will also include smaller, qualitative research to provide a connection to this study by highlighting the more isolated elements of SBE that researchers try to characterize.

One of the earliest SBE efforts, mastery learning, was established in the 1970s and 1980s, as standards were being developed. A meta-analysis of group mastery learning by Guskey and Pigott (1988) demonstrated consistently positive effects on a broad range of student learning outcomes, including student achievement. Kulik, Kulik, and Bangert-Drowns (1990) explored studies of both Keller’s Personalized System of Instruction (PSI) and Bloom’s Learning for Mastery (LFM), in an effort to gather data on the effectiveness of the approaches. They found a positive effect size on student learning, particularly for low achieving students. Although the results were not as dramatic as promised by Bloom, the researchers note that “few educational treatments of any sort
were consistently associated with achievement effects as large as those produced by mastery teaching” (Kulik et al., 1990, p. 29).

In a later effort, researchers used a larger scale research synthesis, completed in 2004 by the Mid-continent Research for Education and Learning (McREL), to examine teacher and student outcomes of standards-based instruction, in relation to predetermined variables of standards-based instruction (Lauer et al., 2005). The framework that this team chose “focuses on the three variables most closely related to teaching and student learning: standards-based curriculum, standards-based instructional guidelines, and standards-based assessment” (Lauer et al., 2005, p. 17). These three variables again parallel the three elements of Bloom’s mastery learning discussed above - the use of learning standards (standards-based curriculum), expected mastery of standards (standards-based assessment), and the qualities of the instruction students receive (standards-based instructional guidelines). This indicates that despite the lack of an overall common definition of standards-based education, these three elements can be considered enduring, fundamental features of standards-based learning. The findings in this study indicated that a standards-based curriculum had a positive effect on student achievement, but other elements had an inconsistent effect (Lauer et al., 2005).

Another study in the body of implementation research that used a literature review and analysis approach focused on comprehensive school reform (CSR), an approach to school improvement that encompasses curriculum, instruction, assessment, and professional development and parent involvement (Desimone, 2002). Although this approach did not explicitly dictate a standards-based education model, it existed as a policy within the context of the evolution of standards in the 1990s, and therefore was
likely strongly influenced by the standards movement. In this study, the author reviewed
literature and identified implementation themes related to CSR that then provided a
theoretical framework, along with a policy attribute theory based on the work of Porter
(1994) to identify elements that both facilitated and provided barriers to implementation.
The theory was that successful policy implementation requires five interrelated
components: specificity, consistency, authority, power, and stability. Desimone's
conclusions point to the importance of implementation fidelity that includes all five
components, including a recognition that "authority, while possibly the most challenging
attribute to achieve, was the one that seemed to have the most influence on the depth and
longevity of implementation" (Desimone, 2002, p. 33). Authority, in this context, can be
related in a larger scale to the evolution in educational policy from merely identifying
standards towards accountability for standards and learning, particularly in light of policy
shifts towards accountability in teacher evaluation models. One can posit that successful
policy implementation at the school level may require strong leadership that creates a
coherent model and uses means of authority and accountability to ensure that reforms
continue.

Although the three meta-analysis research review studies above were looking at
elements of standards-based education more closely tied to classroom instruction, one
large quantitative study tried to tie the degree to which a coherent, state articulated
standards-based reform policy affected student achievement outcomes and classroom
instruction (Swanson & Stevenson, 2002). Using data from National Assessment of
Educational Progress (NAEP) State Assessments in Mathematics, and a framework for
identifying the degree of alignment of state policy activity to standards-based education,
the researchers used data analysis to find relationships between state policy activity and student achievement. They found that state policy activity had a significant effect on teachers’ use of instruction that is consistent with standards-based education, and that it may be related to teacher receptivity to reform based on exposure to professional development. This approach to research is interesting, because although it is largely focused on the effects of classroom instruction on student achievement, it attempts to characterize the degree to which state level policy efforts may influence the instructional practices in classrooms, a thread that this study tried to trace.

One way to look at this connection between state level policy and outcomes in the classroom is to consider the degree to which state level policy promotes a sense of accountability in schools. As the broad policy sweep from the existence of standards in the 1980s and 1990s shifted to school accountability measures grounded in NCLB, the measurement of teacher effectiveness was added as an element of school and state accountability. In many states, individual teachers were held accountable for student achievement on standards-aligned assessments, allowing another window for researchers to look at standards-based education. One study tried to characterize the degree to which effective teachers’ instructional practice was grounded in a strong alignment to standards (Polikoff & Porter, 2014). Using data from the Bill and Melinda Gates Foundation Measures of Effective Teaching (MET) project, and an Opportunity to Learn framework, Polikoff and Porter used teacher surveys to explore the relationship between instructional alignment to standards and measures of effective teaching. Their findings from a subsample of 300 teachers were that “there are very weak associations of content alignment with student achievement gains and no associations with the composite
measure of effective teaching” (Polikoff & Porter, 2014, p. 16). This is an interesting outcome, as prior large scale research by the same author exploring the bridge that instructional alignment to standards may be to the larger policy of standards-based education found that from 2003 to 2009, teachers did increase their instructional alignment to standards, although they tended to report a larger increase than the data revealed (Polikoff, 2012). The conclusion that this alignment may not result in more effective teaching practices and increased student achievement is troubling, because it indicates that the sweeping policy of standards-based reform may not be producing the intended outcomes in terms of student achievement. However, it may also be a result of not being able to capture all the important elements of instruction, and the continuing challenge for standards-based education research of teasing out all the variables at play between a complex policy and the end result of student achievement (Polikoff & Porter, 2014).

One final larger scale implementation study examined the student achievement outcomes from the Re-Inventing Schools Coalition schools, which organize under a model which considers standards-based education design as a key element, along with strong leadership and a shared vision (Haystead, 2010). Haystead used student proficiency on state achievement test data to compare outcomes from seven RISC and eight non-RISC schools, quantifying the degree to which RISC principles were enacted with fidelity in the schools. The key findings of this study indicated that “the comparison between the number of students who scored proficient or above and the number of students who scored below proficient on state tests for reading, writing, and mathematics favored RISC schools and were statistically significant” (Haystead, 2010, p. 5). Because
a hallmark of the RISC schools were a coherent vision and strong leadership, the question of the role of fidelity to a model (alignment) and role of authority (accountability) in standards-based implementation was worthy of consideration, both at the school and state policy level, and formed a line of inquiry in this study.

**Smaller scale, qualitative research.** Given the challenges of larger scale implementation research, the goal of my study was to develop findings in a narrow window of standards-based education. It is therefore important for me to explore reform efforts on a smaller scale, particularly those researchers who have used a case study approach, and have focused on the experience of the teacher, recognizing that teacher is the key element in whether large scale reform efforts will be realized in the classroom. Sullivan (2015) used semi-structured interviews to assess the degree to which teachers and students understood the change to competency-based education in a high school program. He found that both mandates and a sense of moral purpose supported the shift, and despite challenges with implementation, teachers and students reported more engagement and higher rigor. Using a comparative case study with cross-case analysis, Porter et al. (2014) found common themes in the teacher perspective of the shift to the Common Core. He found that the change had a strong impact on their professional and personal lives, and the importance of both the context of the implementation and the role of the district leadership in influencing the change.

Given the demands placed on teachers, clear and consistent expectations, information, and “deep dive” application and support (as opposed to the theory and philosophy of Common Core) provided by district and school leaders plays a major role in teachers effectively implementing Common Core. Such support can
help ameliorate some of the stressful, negative impacts of implementation on teachers’ personal lives and professional identities. (Porter et al., 2014, p. 22)

In another teacher-centric study of perceptions of reform efforts, Loeb, Knapp, and Elfers (2008) used teacher surveys to examine how Washington state’s reform efforts, which explicitly included two of the elements of standards-based instruction outlined above (clear standards and aligned and accountable assessments), shaped teacher’s instruction. They found that teachers changed their classroom practice in response in alignment to reform efforts, but the teachers still had concerns about student achievement and instructional supports that may have indicated continued work towards successful implementation. Another dissertation study that focused on the teacher experience used the framework of teacher sensemaking and a case study methodology to explore how instructional coaches mediated the teacher understanding of standards-based instructional changes associated with implementation of the Next Generation Science Standards (NGSS) (Laxton, 2016). Laxton found that instructional coaches positively influenced the teacher perception of reform, perhaps by allowing a reform effort to be seen in the context of day to day instruction, instead of by large scale generalizations.

As more data is gathered at the national and state level from Common Core aligned assessments, the difficult task of conducting empirical research on the complex policy of standards-based education may become easier. Clearly the challenges of successfully implementing a complex policy at a state, or even local level are daunting, and the challenge of determining through research “what works” in the policy to improve student achievement is even more daunting. However, research is painting a picture of the importance of a coherent, aligned system with accountability measures in place, with
enough glimpses of positive outcomes in research to support the idea that standards-based reform efforts are worth continuing. Research that examines implementation in the state of Maine, the location for this study, in the years after the passage of a proficiency-based diploma law may also help to shed some light on the challenges of translating policy into instructional changes for students.

**Implementation in Maine.** In Maine, the passage of LD 1422, *An Act to Prepare Maine People for the Future Economy* in May 2012 marked Maine's entry into a new era of standards-based reform. With this law, Maine districts were required to award proficiency-based diplomas by 2018, marking a significant shift from the established Carnegie Unit based approach taken by most public high schools. Districts were tasked with defining and articulating “proficiency” in all 8 content areas of the Maine Learning Results (Career & Education Development, English Language Arts, Health Education & Physical Education, Mathematics, Science & Technology, Social Studies, Visual & Performing Arts and World Languages), as well as the Guiding Principles (clear and effective communicator, self-directed and lifelong learner, creative and practical problem solver, responsible and involved citizen, integrative and informed thinker). District were then charged with awarding diplomas based on demonstration of those proficiencies.

Passage of this law represented an effort to improve learning outcomes for Maine students through a policy that tied together two streams of educational reform - the implementation of learning standards, and the belief in accountability measures. Essentially, the thinking appeared to be that students would learn at higher levels if Maine schools organized around a clear set of learning standards, the Maine Learning Results, and the schools are held accountable to the standards through the awarding of
diploma based on those standards. Although the Maine Learning Results standards existed since 1997, and schools were accountable to testing results based on those standards beginning in 2002, the end result for Maine schools was typically to align their curriculum with the standards. Schools took their existing curriculum, aligned it to the Learning Results, but did not fundamentally reorganize classroom instruction. LD 1422 appeared to call for a shift to schools from aligning to standards to designing curriculum around standards, which required a significant shift in classroom instructional practice and clear and coherent principal leadership.

The move in Maine to the adoption of a proficiency-based diploma through LD 1422 was not made in isolation from regional and national trends. Many states had been instituting high school exit exams, requiring that students pass them in order to graduate. In 2002, 18 states had mandatory exit exams, and that number had grown to 24 states by 2012 (Hyslop, 2014). In Maine, where the locus of control of school curriculum rests with local school boards, instituting a high school exit exam system may have been seen as an untenable graduation policy. Instead, Maine leveraged regional efforts in New England, particularly New Hampshire’s use of competency-based education as an organizing structure for high school graduation. Competency-based education represents the same idea as proficiency-based education, with a different descriptor, essentially requiring high schools to define and measure student competencies as a condition of graduation. These efforts to articulate student competencies or proficiencies have grown in New England since 2012 to include Connecticut, Rhode Island and Vermont, and are advancing in a handful of western states (Sturgis, 2016).
The landscape of Maine reform efforts shifted in July 2018, with the passage of LD 1666, *An Act to Ensure the Successful Implementation of Proficiency-based Diplomas*. Despite a misleading title, this bill was essentially a partial repeal of the law, allowing districts to choose a proficiency-based diploma system or a traditional system (Kornfield, 2018). This provided a slightly more complex landscape for the study. The passage of LD 1666 happened after data collection for the study was underway, and although questions about the change in law were not included in the interview protocol, some participating principals considered how this shift in educational policy might impact their school practices.

Despite the current status of Maine reform efforts, research focused on the success of this initiative occurred regularly over the course of a number of years of implementation. The Maine Education Policy Research Institute (MEPRI) undertook an annual series of research reports to assess the ongoing implementation of the proficiency-based diploma law, using a case study format (Silvernail, 2013; Silvernail, Stump, & Hawes, 2014; Silvernail, Stump, McCafferty, et al., 2014; Stump et al., 2016). In the initial Silvernail et al. (2014) study, the authors noted that without empirical research to guide the development of a framework, they had to create their own conceptual model of a proficiency-based diploma system, depicting it as a system. The findings of the initial study indicated that although many of the nine schools included in the study were building systems to support the awarding of proficiency-based diplomas, there was considerable variation in the emerging systems, and a struggle with managing and tracking learner data on a school level. Many of the elements in the law, including
allowing students multiple pathways to demonstrate proficiency, proved to be very complex to realize within the constraints of the school structure and resources.

For the second study, Silvernail, Stump, McCafferty, et al. (2014) used the same conceptual framework and case study approach to examine eight schools, with some carryover in schools from the prior study. Again, they found that educators were largely supportive of the work at the school level, believing that it increased student engagement and was the "right" work to do. However, there continued to be challenges with implementation, most notably that there was not clear guidance for schools in terms of standards and assessments to determine proficiency, resulting in variable choices in the study schools and differing understandings of implementation. A cross-case analysis of the Phase II results supported the observations of inconsistency in the understanding of the reform, including an acknowledgement that establishing shared beliefs and understandings was critical to the success of the endeavor at the district level.

The Phase III study had a different focus, although the researchers still used the case study approach, adding a document review methodology and including seven districts. "In this Phase III of the study, examination of the application documents, practices, policies and standards of several case study districts provided insights into the development of local high school graduation policies aligned with Maine's proficiency-based diploma legislation" (Stump & Silvernail, 2015, p. 5). Although the researchers found many commonalities among the districts, there still existed concerning variations, including the choice of standards that schools were using and how they defined and interpreted proficiency. Phase IV of the annual study process featured six school districts, 3 of which had participated in previous phases, allowing for ongoing study of
their implementation (Stump et al., 2016). The study found increasing consistency within districts in terms of identified standards and proficiencies, but continued variation across the study districts. There were still many educator challenges associated with implementation, including technical issues with using new grade scales and reporting tools, and gathering community and school support. Schools made effective strides in adding intervention systems to support student learning, and increasing professional collaboration to support the evolving initiative.

The implementation difficulties that Maine schools experienced since 2012 resulted in significant revisions to the policy in an effort to keep it alive. The July 2018 passage of LD 1666 changed the landscape for many Maine schools, and added an unexpected element to this study, as the change occurred in the midst of the research. Regardless, Maine’s experience with realizing a complicated proficiency-based education policy highlights the challenges researchers have in drawing a clear line between standards-based education and improved student learning outcomes. Implementation research, especially on a larger scale, is difficult due to the “messy” nature of school-based change. However, there are areas where research has a role in teasing out effective standards-based practices by examining building principals’ leadership practices as they interpret and lead standards-based reform.

**Summary and connection to study framework.** Based on the widespread adoption of the CCSS, and the continued emphasis on standards and accountability at both the federal and state levels, the arc of standards-based reform does not appear to be on the wane. Efforts will likely continue to draw a connection between standards and increased student learning. One interesting area of research at the state level is the
relationship between the role of alignment and accountability. Specifically, the alignment of implementation fidelity of all the elements of standards-based education to the measures of accountability through teacher evaluation programs and state level assessments (Coburn et al., 2016). These authors suggest that building on the knowledge base that exists in implementation research “the next generation of implementation research will be most useful if it is carefully structured to test hypotheses surfaced by prior studies and to illuminate processes that have yet to be explored systematically” (p. 246).

To this end, they propose a framework that focuses on examining, at the state level, two elements, the degree of alignment and the strength of accountability of a particular policy. They suggest sampling districts or states, using a set of hypotheses grounded in these two elements. For example, in districts with weak accountability and low alignment to the policy in question, teachers receive mixed messages and no pressure to change. By contrast, systems with high alignment and strong accountability may see a stronger, more cohesive implementation of new instructional practices. Although Coburn et al.’s framework is designed for state-level implementation, it provided a useful lens to also consider building level standards-based reform efforts and was used to inform the theoretical framework of my study. From casting a wide net with national and state level standards-based reform efforts, the review will now turn to considerations of leadership and implementation at the school level, as the role of the principal in leading change is examined.
Principal Leadership Research

Brief history of school leadership. Over the past few decades, the role of the school principal has evolved from being a manager of isolated teachers to orchestrator of instructional improvement in a school. As Robert Eaker, cited in Schmoker (2006) offered, “The traditional school often functions as a collection of independent contractors united by a common parking lot” (Schmoker, 2006, p. 23). School principals were typically not tasked with providing leadership around classroom instruction - that was seen as the purview of teachers, with their expertise in content and pedagogy. As the shift to making schools accountable for the achievement of their students took hold, principals were increasingly charged with leading the instructional improvements necessary to boost student achievement and success.

Many educational thinkers have attempted to shape the incredibly complex job of school leadership into models that can be more easily shared and understood. Early views about successful school leaders were based on military thinking - that a good leader was heroic and solitary, and more “born” than “made”. With the advent of more behaviorist thinking, management ideas from business were applied to schools, such as transactional leadership (Burns, 1978). With the increasing expectation of school leaders to tackle significant restructuring efforts in schools, the idea of transformational leadership took hold as an appropriate model for principal leadership (Leithwood & Jantzi, 2005). Continuing to build on the idea of characterizing the actions and behaviors of successful leaders, models such as distributed leadership (Spillane, Halverson, & Diamond, 2001) and instructional leadership (Glickman, Gordon, & Ross-Gordon, 2001; Hallinger, 2003; Marks & Printy, 2003) took prominence in the literature. In another approach, meta-analytic studies of school leadership have tried to winnow out the most
significant leadership behaviors that contribute to student achievement, in an effort to focus principal time and efforts on the most impactful strategies (Marzano et al., 2005). There is no dearth of models for leadership, and there exist comprehensive summary works that attempt to describe in great detail the various schools of thought around effective leadership approaches (Northouse, 2018).

Principal leadership - influence in schools. Not in question for researchers, however, is the recognition that effective principal leadership has a significant influence on school success (Day et al., 2016; Leithwood et al., 2008; Marzano et al., 2005; Waters et al., 2003). School principals "exert leadership through constellations of actions that coalesce around different ‘models’ of leadership, including transformational, instructional, moral, or participative leadership" (Leithwood & Riehl, 2003, p. 23), and the most effective principals focus on setting direction and vision, developing teachers, and developing school organizational function (Leithwood & Riehl, 2003). In addition, researchers who have examined the principal’s role in enacting school reform have identified that the principal is a key lever for moving the work forward (Bryk, 2010; Hallinger & Heck, 1998; Supovitz et al., 2009). This was an important aspect considered for my study, as it focused on the implementation of standards-based reform. If researchers agree that principal leadership matters, and the standards-based reform efforts are, at their essence, about improving student achievement, it stands to reason that the next step in my literature review should focus on the research about how effective principals lead the instructional changes that should accelerate student learning.

Principal influence on student learning. Research evidence abounds describing ways that principals hold influence in schools - from creating a, promoting a trusting and
supportive environment, carefully supervising and evaluating teacher performance, and a myriad of other elements, small and large, that influence school success. However, for the purpose of my study, which examined principal understanding of standards-based educational reform efforts, a closer examination of the influence of principals on student learning is most appropriate. In the research, student learning is most often characterized as student achievement, as measured by standardized testing. As the promise of standards-based reform is to increase student achievement and engagement through the improvement of instructional practices, looking at principal leadership through the lens of instructional leadership is useful.

The first descriptions of instructional leadership rose from observations of impoverished urban schools in the 1980s, and influence on learning that charismatic, heroic principals appeared to have on the success of the school (Hallinger & Murphy, 1985). In later years, the notion of instructional leadership broadened to include elements of shared or distributed leadership, and the idea that the successful principal orchestrates a multitude of school “players” to achieve improvement in the quality of classroom instruction (Hallinger, 2003; Hallinger & Heck, 1996). As opposed to merely generating descriptions about principal leadership practices, Spillane, Halverson and Diamond (2004) identified the need to create a conceptual framework of distributed leadership to best explain the behaviors and actions of successful principals. They noted, which was significant for this research study, that “to study leadership practice, we need to study leaders in action” (p. 27). They go on to “argue that leadership activity is constituted — defined or constructed—in the interaction of leaders, followers, and their situation in the execution of particular leadership tasks” (p. 9). Going beyond simply identifying
leadership tasks, Spillane et al. highlight the need to understand how these tasks are enacted in the particular context of the school.

More recent research about instructional leadership has used some earlier conceptual leadership models, but focused more closely on the use of quantitative instruments to capture specific leadership facets within the context of the schools (Pietsch & Tulowitzki, 2017). These researchers found that “school principals have a strong influence on the work setting, innovation capacity, and motivation and a considerably smaller influence on the instructional practices of their staff, with mechanisms being first and foremost direct ones” (p. 17). They also indicate that in a complex change environment, it becomes even more important for principals to effectively integrate leadership approaches to achieve improvements in student learning. This integration of transformational leadership approaches, with instructional leadership approaches, has also been explored by other researchers. Day et al. (2016) found that successful leaders integrate leadership approaches “in different ways across different phases of their schools’ development in order to progressively shape and ‘layer’ the improvement culture in improving students’ outcomes” (p. 1). These studies, both conducted with data gathered outside the United States, hint at the level of sophistication effective leaders bring to bear in adapting to changing contexts in their schools, and the need for a complex leadership approach in a complex change environment.

**Principal responsiveness to context.** Other international researchers have highlighted the importance of understanding the context that shapes the school leadership environment. This seems particularly valuable when considering the school leaders’ response when faced with implementing a novel educational reform initiative, such as
standards-based education. Context matters. The school leader may be facing pressure from the district to enact changes, or struggling with understanding the initiative, or working with a resistant group of teachers who need to be convinced to change. The school may be under-performing or performing well enough that the community would prefer that current classroom practices remain steady. This notion of contextual leadership has not been established as a theory, like instructional leadership, but it is a thread that seems to weave itself through recent studies, as researchers try to quantify specific facets of complex leadership behaviors.

Proposed as a way to understand leadership in general, contextual leadership theory was forcefully argued by Osborn et al. (2002) as being a “neglected side of leadership”, stating that “leadership is embedded in the context. Contextual leadership theory is socially constructed in and from a context where patterns over time must be considered and where history matters. Leadership is not only the incremental influence of a boss toward subordinates, but most important it is the collective incremental influence of leaders in and around the system” (p. 2). Hallinger brings this consideration of contextual leadership to the school setting through his conceptual synthesis exploring several types of school contexts, and how they may affect leadership practices (Hallinger, 2016). He found that his study “affirms, elaborates and extends the assertion made by scholars of the importance of examining leadership in context” (p. 1), and also noted that “the field needs to refine current research methods and explore new approaches that enable us to better study how successful leadership responds and adapts to different contexts” (p. 1). Another effort, researchers in the International Successful School Principalship Project (ISSPP) conducted over 100 case studies. They found that “these
case studies overwhelmingly demonstrate that successful school leaders align their leadership practices with their own unique contextual requirements, which are the part of a larger national context” (Noman et al., 2016, p. 3).

**Summary and connection to study framework.** In examining the role of the principal in the context of standards-based reform, my study built on the research about both instructional leadership, focused on improving student learning, and contextual leadership, focused on responding to the unique dynamics of the school and district. My study provided insights into the leadership behavior of principals in their own unique school context by narrowing the focus to how principals seek to respond to and lead standards-based change efforts in their own schools and districts. To glean more specific findings in the complex world of school leadership, I developed a leadership framework that further characterized specific contextual factors that may influence school leaders.

Drawing on the idea of Leithwood (2017), that there exist “person-specific” contexts and “widely-shared contexts”, Hallinger (2016) elaborates that the person-specific context consists of the job knowledge, skills, attitudes and experience a leader brings to the job. The leader’s life experience and personal resources act as a prism through which information, problems, opportunities and situations are filtered and interpreted. Widely shared contexts refer to features of the broader organizational and environmental setting within which the school and the principal are located. (p. 3).

My leadership framework in this study built on this idea by allowing me to examine both the beliefs the principal holds about standards-based reform efforts (person-specific
context) with the sense of district accountability that was imposed on a principal to enact change (widely-shared contexts).

**Sensemaking Theory Research**

With this body of research around instructional and contextual leadership established, the next area of research that informed my study focused on how principals undertook cognitive processes to interpret and respond to new reform initiatives. Although there is a body of educational policy implementation research that focuses on outcomes, such as student achievement, there is another body of research that takes a cognitive perspective to determine how policy takes the path from formation to actual implementation at the school and classroom level.

Before considering the role of school principal cognition and leadership, it is helpful to frame the job of a school principal. As described by Rousmaniere (2013), the principal is both the administrative director of state educational policy and a building manager, both an advocate for school change and the protector of bureaucratic stability. Authorized to be employer, supervisor, professional figurehead, and inspirational leader, the principal’s core training and identity is as a classroom teacher. A single person, in a single professional role, acts on a daily basis as the connecting link between a large bureaucratic system and the individual daily experiences of a large number of children and adults. (p. 1).

Highlighted in this quote is how the school principal functions as the connective tissue of the organization, tasked with initiating change while also preserving school culture and mediating the change process for the employees. Through this lens, the principal’s
individual cognition is a process of sensemaking as he or she translates the changes into coherence and eventually into action.

**Sensemaking theory in organizations.** Organizational theory contains the psychological roots of sensemaking (Weick, 1995, 2000). Weick (2000) describes sensemaking as similar to the activity of cartography. The cartographer decides what to represent, what tools to use, what terrain to include, and how to unify all the elements into something intelligible. Sensemaking is more about the journey than the destination, as it is situated in a unique social and organizational environment that is changing, requiring a constantly evolving map. At its heart, sensemaking is retrospective, as the individual continually validates and justifies the choices that shaped the map. Central to the concept of sensemaking is also the notion of “enactment” - that the individual both creates as well as responds to the organizational conditions through which he operates (Weick, 2000).

**Sensemaking theory in school policy implementation.** Using sensemaking theory, educational researchers have focused on a multi-dimensional understanding of the forces that shape how the “actors” - teachers and administrators - respond in novel situations, based on their own individual cognition, their role in the school, and the larger district and state expectations that shape their leadership decision making and policy implementation. Educational researchers have adapted the theory to focus on implementing novel educational policy at both the classroom and building level (Evans, 2007; Louis, Mayrowetz, Smiley, & Murphy, 2009; Rigby, 2015; Spillane, Diamond, et al., 2002; Spillane, Reiser, et al., 2002). Focusing on “the interplay between the policies that attempt to direct local action and the ways in which that direction is constructed by
locals" (Spillane, Reiser, et al., 2002, p. 3), the researchers have attempted to gain a better understanding of the cognitive forces that are at work, in an effort to make a complicated policy implementation more transparent. One researcher noted that “when teachers or administrators are confronted with a new set of practices....their interpretations of it will determine whether they engage in significant change, incremental change, or resistance”(Louis et al., 2009, p. 2). Thus, a crucial element in shaping policy implementation is exploring how those interpretations are formed.

In a study about principal leadership around racial issues, Evans (2007) noted that,

to make sense of things, leaders ‘draw from’ various individual, social, and institutional contexts to read meaning into the situations they must interpret. From this, leaders determine what to emphasize, downplay, or ignore in their words, actions, behaviors, and decision making. It seems reasonable that school leaders’ own history and background, beliefs, work history, role identities, and group affiliations figure prominently as they frame and interpret issues and events and construct their roles in the manner they do. Moreover, the myriad of organizational and institutional contexts surrounding schools provide school leaders with ideological, social, and political cues that signify patterns, filter information and experiences, and guide actions and behaviors. (p. 162).

This description draws attention to two particular factors that affect school leaders as they are engaging in sensemaking - their own belief system concerning the change they are to interpret, and the institutional contexts that shape their sense of accountability related to change - both of which were central to this study.
In considering these institutional and political contexts, and starting with the premise that school principals are important mediators of policy for classroom teachers, Spillane, Diamond, et al. (2002) examined the leaders’ sensemaking of accountability policies, particularly related to improving student achievement. The researchers noted that, “implementation of district accountability policy has to be understood in terms of a two-way interaction in which accountability policy shapes and is shaped by the implementing agent and agency” (p. 25). Principals’ sensemaking was also explored in the context of how novice administrators understood their role in teacher evaluation. Rigby (2015) found that as new principals’ were building their professional identities, both the multiple messages they received about teacher evaluation, and their relationship with individual teachers affected how they enacted evaluation in their settings. Other researchers focused on how principals enact instructional leadership, both in teacher supervision (Carraway & Young, 2015), and in supporting coaching of teachers in reading instruction (Matsumura, 2014). These researchers found that the principals’ prior knowledge and his or her own identity influenced their decisions. In addition, Matsumura specifically explored the interplay of individual principal beliefs and the policy context, and found the interplay was related to how the principals’ positioned the coaches in their schools. This suite of research lent support to the view that not only was sensemaking theory a helpful frame for exploring principal behavior with this study, but sensemaking theory also provided a foundation for specifically examining individual principal beliefs and their particular district policy context.

Other researchers have explored how teachers use sensemaking in a context of standards-based reform efforts. Allen & Penuel (2015) found that teachers’ who used
active and sustained sensemaking activities in a professional development context were able to create coherence in their understanding of science standards, indicating that understanding the role of sensemaking may be critical to efforts to provide professional learning around new policy. The importance of understanding the professional community in which educators operate was also highlighted by (Coburn, 2001), demonstrating how teachers co-construct meaning and navigate the practical implementation of policy with their colleagues, often shaping or transforming policy initiatives in the process.

**Integrating a frame analysis approach.** Although sensemaking theory can be found in a number of research settings, one criticism of the approach is that it does not capture the complexity of implementing new educational policies in schools. Coburn (2006) noted that “sense-making theorists have tended to emphasize shared understanding, paying little attention to issues of contestation and the dynamics by which differences in interpretation are negotiated” (p. 344). Coburn’s solution, utilized by other researchers as well, considered frame analysis as a supporting methodology (Vermeir, Kelchtermans, & März, 2017), integrating both approaches to address both the specific intentions of the problem, as well as the interpretations that unfold from the sensemaking process.

The concept of framing has its roots in the social sciences, as a way to study social movements and collective action (Goffman, 1974). Collective action frames can help characterize how, when faced with a problem, individuals and groups will construct meaning through a process of identifying responsibility for the problem, deciding on a set of actions or strategies to respond to the problem, and creating a message to motivate
others to take action. These can be described as “diagnostic framing”, “prognostic framing”, and “motivational framing” (Snow & Benford, 1988). In later research looking more closely at how these framing activities are realized when social groups are faced with a mobilizing problem, the recursive nature of framing is highlighted. Individuals and groups cycle through a constant process of diagnosis, prognosis, and motivational messaging, as conditions and interpretations evolve (Benford & Snow, 2000). Framing theory in school settings has been used to understand how principals advanced teacher evaluation systems (Woulfin, Donaldson, & Gonzales, 2016) and how they interpreted and communicated the use of the Common Core Standards (Stosich, 2017). In my study, the use of frame analysis, explored in more depth in Chapter 3, focused the sensemaking model to better capture how the principals were interpreting their leadership role and making decisions in their particular school environments.

**Summary and connection to study framework.** In considering how to best utilize sensemaking theory to understand educator behavior when faced with new policy initiatives, Spillane, Diamond et al. (2002), proposed a cognitive framework that includes individual cognition, situated cognition, and the role of representation as three interrelated areas of sensemaking that are active as an educator attempts to understand and implement novel educational policy.

What a policy means for implementing agents is constituted in the interaction of their existing cognitive structures (including knowledge, beliefs, and attitudes), their situation, and the policy signals. How the implementing agents understand the policy's message(s) about local behavior is defined in the interaction of these three dimensions. (p. 388)
Instead of a rational model - where a policy initiative simply is enacted in schools as it was originally intended, Spillane, Diamond et al (2002) take a different approach. They recognize the complexity of reforms and then provide a means for researchers to explore the consequent complexity of the human cognition related to the reforms. Frame analysis provided boundaries in my study - to focus the principal sensemaking on the elements under consideration - how their personal and professional belief alignment, and the forces of district accountability influence their leadership approach when enacting standards-based reform. An integration of sensemaking theory and frame analysis seemed a fitting lens to view how principals respond to the complexity of moving educational policy from creation to classroom implementation

**Overall Summary and Appropriateness of Literature Review**

Through this review of the relevant literature, I establish three claims as the foundation for the importance of this study. First, standards-based reform is a significant initiative in schools, and implementing these models and programs benefit from being better understood. Second, principal leadership matters, and principals have a strong influence over what instructional practices and approaches are prioritized in schools. The third claim follows closely - that if principal leadership matters, understanding how these leaders make decisions and enact changes in their schools is vital, and sensemaking theory and frame analysis provide a valuable framework to inform that understanding. This study informs the research on principal leadership practices or standards-based standards implementation by focusing on how middle school principals explain their decisions leading standards-based reform efforts in their schools. The study also adds to research on effective educational policy implementation.
Chapter 3 Methodology

Introduction

Across the nation, with the adoption of the CCSS, the NGSS, and other suites of standards, schools are re-designing school curriculum around the use of learning standards. In 2012, with the passage of LD 1422, *An Act to Prepare Maine People for the Future Economy* Maine high schools were required to redesign their graduation pathways. Beginning with the class of 2021, high school diplomas would demonstrate “proficiency” of the Maine Learning Results standards. Within six years the state legislature recognized that districts needed more time and could not meet the original class of 2018 deadline. The July 2018, passage of LD 1666, *An Act to Ensure the Successful Implementation of Proficiency-based Diplomas*, allowed districts the choice of a proficiency diploma system or a traditional system (Kornfield, 2018). LD 1666 changed the landscape of proficiency-based curriculum work in Maine.

However, many districts had already undertaken reforms to design a support system at the middle and elementary school grades that could support the diploma plan at the high school level. The impact of the change in the diploma law on my study was minimal, as it came immediately prior to data collection, before principals had a chance to determine how it would change their leadership. I included the reflections from the principals who had a chance to consider how the change in law would affect their leadership. Although questions about the change were not included in the interview protocol, some principals offered a perspective as they considered accountability measures in their school contexts.
The purpose of this study was to describe and analyze how middle school administrators made sense of their role in leading the adoption of standards-based educational practices in their schools. I used a theoretical framework in which I could look at the alignment between administrator’s personal beliefs in the value of standards-based education against the accountability administrators felt from the district/state to lead the change to standards-based education. I wanted to identify how these forces influenced the leadership choices made by principals. The research is grounded in the theory of sensemaking. My study explores how educators interpret new educational policies and ideas through their own mental models. The fidelity of implementing a policy is likely determined by an educator’s deeply held perceptions of his or her role in the change process. I structured interviews with a particular focus on a three stage sensemaking framework of individual cognition, situated cognition, and the role of representation (Spillane, Reiser, et al., 2002).

In addition to using sensemaking theory, I used a frame analysis approach to create a unique framework in which I attempted to further clarify the forces acting upon the interviewees’ leadership decisions and actions. This study draws on the research tradition of frame analysis in school policy implementation (Benford & Snow, 2000; Snow & Benford, 1988), and state level policy implementation work (Coburn et al., 2016). I considered that principal sensemaking around standards-based reform leadership would align their beliefs and their sense of accountability. Using them as elements of a frame analysis approach, evoked by Benford and Snow (2000), I investigated the role beliefs and accountability played in middle school principal sensemaking. Through a comparative case study approach, I examined the beliefs and interpretations of four
middle school principals in Maine. The principals were in varying stages shifting to a
standards-based educational model, as they led their buildings in response to new
educational policy.

This study seeks to deepen the understanding of how middle school
administrators operate in a changing climate of standards-based educational reform. My
two research questions are:

- How do middle school principals make sense of their role in leading standards-based educational change?
- How do the forces of
  - their belief in the value of the standards-based education and
  - their accountability to the district and state to create change, affect their
    leadership practice in the school?

I explicitly wanted to know how middle school leaders were affected by the forces of
belief and accountability and I will explain in more detail as the theoretical framework is
unpacked.

A comparative case study research design, with cross case analysis, allows me to
document how four active Maine middle school principals lead standards-based reform
efforts in their buildings. The context for my study includes the national push towards a
standards-based model, and the Maine expectation that middle schools play a supporting
role for high school standards-based efforts.

**Methodological Overview**

I used a comparative case study qualitative research method based on in-depth
interviews with four middle school principals. Why interviews? According to Seidman
“at the root of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience” (p. 9). As much as policy-makers believe in a technical-rational approach to reform in which policy-makers design a solid policy and expect it to be implemented as designed - the reality at the school level is very different. The gap between formal policies and their precise implementation is based in part on the way principals and teachers interpret the policy, and the actions they choose to take in their schools and classrooms.

I chose a phenomenological approach to this research because this approach, as Yin (2015) noted, “attends not only to the events being studied but also their political, historical, and sociocultural contexts” (p. 20), and “strives to be as faithful as possible to the lived experiences, especially as might be described by the participants’ own words” (p. 20). The phenomenological approach allows me to capture the experience of the principals and apply an interpretive analysis to that experience. This research methodology acknowledges the unique perspectives of the principal, but also allows for themes or patterns to emerge. I discovered how standards-based learning initiatives are unfolding in Maine and by association how larger policy questions are unfolding nationally.

I also used a descriptive interpretivism paradigm, believing it was important for me to understand the principal’s school context and to describe that world as deeply and authentically as possible. My goal was to reflect the worldview of the principals in the study, recognizing that they are “viewed as creators of their worlds” (Rossman & Rallis, 2003, p. 34), and thus have “agency in shaping the everyday world” (p. 35). An explicit stance in my research methodology was understanding how each principal constructed
meaning from the stimuli that he or she received about standards-based instruction, and how each represented their meaning.

Execution of education policy has been shown over many years to be a complicated and messy business, with understanding and action filtered through a myriad of lenses, from superintendents to principals to teachers themselves. Most often, the end result that students experience in the classroom is worlds apart from what the policy makers envisioned. I used a descriptive interpretivism stance, coupled with a phenomenological approach, featuring in-depth interviewing, in order to glean key ideas and understandings from this complicated process. In turn, my findings will point to implementation strategies that complement policies, ensuring that good ideas and plans for education find their way with fidelity into the classroom instruction.

**Selection and Sampling Strategies**

I chose comparative case study design, with cross case analysis for this study because it allowed me to situate the research with specific individuals in the context of their schools. Cross-cutting themes and patterns emerged and were comparable across schools. To deeply understand a case “requires experiencing the activity of the case as it occurs in its context and in its particular situation” (Stake, 2006, p. 12), which aligned well to the aims of the study, and allowed the principals themselves to be the case that is studied. Although Stake (2006) argued that a multi-case study is too complex for one researcher to undertake effectively, by creating careful boundaries to the case, and developing a carefully considered interview protocol, multiple cases provided much more robust data and findings, as patterns emerged across the cases. I considered each principal’s experience and perspective as an unique case, but a more generalized
understanding of principal sensemaking around standards-based reform emerged through cross case analysis.

I chose four active middle school principals to participate. The principals were all leading in buildings with sixth, seventh, and eighth grades represented. The schools were small to average size by Maine standards, ranging from enrollment in each grade level from 75 to 100 students in two schools, to approximately 175 students per grade level in the other two schools. All the schools were within 40 miles of Portland, Maine, and were the only middle school in their district. The principal participants all met the study criteria – they had been in their current position for at least three years, and they had been administrators in a prior school. They were all White, and balanced by gender, with two female and two male participants. For the purposes of the study, I identified them as Principal Red, Principal Blue, Principal Black and Principal Green. Because the study area of Maine is small, I took care to only provide a cursory level of detail about their district, school, and prior administrator experience to preserve confidentiality.

The principals participated in a series of in-depth interviews in which I gathered data about their individual case. I used these data to examine themes across their schools. I deliberately chose to study middle school principals, given the scope of the research questions, and the location of the research in southern Maine. The middle level school is best suited for this examination of principal’s beliefs in standards-based reform and the accountability to lead reform efforts. In Maine, high school administrators feel the pressure of trying to meet the expectations of the proficiency-based diploma law, which may artificially increase their sense of accountability towards promoting standards-based education. Elementary level administrators have been steeped in a version of standards-
based education for many years, as most elementary schools report student grades in a standards-based format. However, elementary administrators are removed from proficiency-based diploma expectations, lending their perspective less useful to the study purpose.

Middle school administrators, however, have varied expectations placed on them to lead standards-based school reform. Many middle schools still use traditional grading systems, and although middle level administrators may be expected to support the high school proficiency-based diploma efforts by “laying the groundwork” in middle school, there is often more latitude provided in directing how those efforts unfold. Thus, middle level principals were ideally positioned to be aware of standards-based education and have the autonomy to implement their beliefs and practices, rendering their sensemaking efforts about standards-based reform more nuanced and interesting.

I selected middle school administrator participants based on two important criteria -- 1) middle school principals who were at least three years into their tenure in a building, and 2) middle school principals who had been an administrator in a different district or building. I set this criteria based on the assumption that 1) it takes a few years to become established and have the supervisory “capital” to move the change process forward and 2) administrators with prior experience in other districts/schools may have a more multifaceted view of the change process. The principals I considered were using standards-based instructional approaches at different stages of implementation, although all the participants had many elements of standards-based practices in place in their schools. The size of school, or location in a rural or suburban setting was not a strong
factor for consideration. The schools I considered were located within a 40 mile radius of Portland, Maine.

An initial screening of participants, using publicly available data, indicated that there were approximately 13 principals who met the study criteria. These principals were contacted informally to gauge interest in possible participation, then provided a more formal recruitment script via email if they showed interest in joining the study. I met with all interested participants to gather preliminary information, describe the study in more detail, and confirm participation.

I gave priority to schools and districts that were at differing points in the reform process, and did not have unique school structures in place that drove their instructional model (e.g., International Baccalaureate or Expeditionary Learning models). To gauge the reform efforts at potential schools, those principals who described their school as not making any efforts towards standards-based implementation were not considered. I made an effort to include schools and administrators who felt the most unsettled about their reform efforts. Those principals who struggled to align their beliefs with the culture of accountability in the school and district were more attuned to the need for sensemaking around the new approaches. The four principals, two male and two female, who participated in the study met all the study criteria, and provided thoughtful and reflective perspectives, lending the validity and depth to the study.

**Theoretical Framework**

If a school principal is a key player in leading standards-based reform efforts, it seemed important to illuminate the sensemaking that drove the leadership choices that he or she made, particularly as it related to the alignment of her beliefs to standards-based
reform, as well as the pressure he or she may have felt from the district to accomplish change. Drawing from the work of Coburn et al. (2016), who proposed a research approach for state and national policy implementation that investigated “the intersection of learning and power in policy implementation” (p. 246), my study used these elements on a personal level for the interviewee, through a unique theoretical framework.

Coburn et. al. (2016) identified two elements -- alignment and accountability -- as significant features in state and national educational policy. The researchers proposed that policymakers, “should take advantage of natural variation across states and districts to investigate how strength of accountability and degree of alignment influence the implementation of instructional policy” (p. 246). I used the two elements to construct a frame analysis approach (Benford & Snow, 2000) in order to examine the role alignment and accountability play in middle school principal sensemaking. In other words, principal sensemaking is the degree to which alignment of beliefs in standards-based educational approaches affect each principal’s leadership decisions, as well as the level of accountability the principal feels - from the local district and state - to lead a change effort in their buildings.

The theoretical framework integrated sensemaking theory and frame analysis complement each other in addressing the research questions. I structured interviews using a three stage framework that includes individual cognition, situated cognition, and the role of representation (Spillane, Reiser, et al., 2002). Understanding sensemaking of standards-based reform is key to understanding how principals lead in a reform environment.
Drawing from the research tradition of frame analysis in school policy implementation (Benford & Snow, 2000; Snow & Benford, 1988), I used diagnostic frames, prognostic frames, and motivational frames to guide the data collection and analysis. Table 1. *Theoretical Framework – Sensemaking and Frame Analysis*, summarizes how these frames interacted for the purpose of the research study.

<table>
<thead>
<tr>
<th>Frame Analysis (Benford &amp; Snow, 2000)</th>
<th>Sensemaking Theory (Spillane, Reiser, et al., 2002)</th>
<th>Role of Representations (Policy Focused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Framing - focusing responsibility for or reasoning about the choices.</td>
<td>Diagnostic - Individual Belief</td>
<td>Diagnostic - Accountability within District Context</td>
</tr>
<tr>
<td>Essential Question: What do you believe are essential elements of a proficiency-based learning system and what informs your belief?</td>
<td>Diagnostic - Belief within School Context</td>
<td>Essential Question: What elements of a proficiency-based learning system are currently successful in your school?</td>
</tr>
<tr>
<td>Prognostic Framing - proposed solution and strategies</td>
<td>Prognostic - Individual Belief.</td>
<td>Prognostic - Accountability within District Context</td>
</tr>
<tr>
<td>Essential Question: In your ideal school setting, what do you believe promotes effective learning?</td>
<td>Prognostic - Belief within School Context</td>
<td>Essential Question: What instructional leadership priorities do you choose, knowing the staff you are working with?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Essential Question: What changes would you make to your leadership priorities, if the proficiency-based diploma mandate did not exist?</td>
</tr>
</tbody>
</table>
The three frames provided a familiar structure for the principals in the study, who are constantly diagnosing and solving problems, large and small, on a daily basis. This type of thinking is routine for school principals, so using these frames in an interview setting helped yield interpretations and understandings that were more reflective of the actual leadership decisions the principals were making. The three frames helped me understand the alignment of the principal’s beliefs in standards-based education, and the influence of district accountability demands on each principal’s leadership practices.

Data Gathering Procedures

The primary method of data collection was a series of three in-depth, one to one semi-structured interviews with each middle school principal, following a protocol designed around a unique theoretical framework. The framework integrated sensemaking theory and frame analysis as discussed above (see Appendix B for interview protocols). The first interview focused on their individual cognition, eliciting their individual beliefs, experiences, and knowledge about standards-based education. The second interview examined their situated cognition, seeking out how those beliefs and understandings aligned with their school culture and practices, and influenced their efforts to lead change in the school. The third interview focused on the role of representation, looking more
closely at the standards-based education policies. The interview revealed how each 
principal prioritized his or her reform efforts, including how policies were translated by 
outside parties (district curriculum leaders, superintendents, etc), and how those 
translations influenced his or her leadership choices.

One challenge about research focused on standards-based education is that there 
is little common understanding of the essential features of a standards-based instructional 
model, and even little agreement on exactly what comprises those essential features. To 
address that challenge in my interviews, I used two different sets of cards as part of the 
protocol. My goal was to arrive at shared operational definitions of standards-based 
education. One card set outlined different elements of standards-based education models 
(see Appendix C), and I asked principals to sort them and reflect on their own beliefs 
about essential elements that should be included in an effective model. Their response 
brought clarity about the principal's initial stance about standards-based education, 
provided context for the rest of the interviews and allowed for more comparability across 
the cases.

A second card set outlined a parallel list of standards-based education elements 
including possible tasks that a principal would lead as the school staff built a standards- 
based instructional model in the school (see Appendix C). I used the second card set 
asking the principals to describe what they would include in their ideal school, how they 
would evaluate the success of the leadership choices he or she had made in the past 
(diagnostic frame) and disclose future leadership priorities he or she might undertake 
(prognostic frame. Guided by my theoretical framework, my interviews generated strong
evidence of the principals' beliefs about standards-based practices and the district accountability that were driving their leadership decisions.

In addition to using the card sorts as a foundational feature of the interviews, I used a series of open-ended questions with principals to identify other priorities that drove their leadership decisions. This allowed unexpected themes and patterns to emerge, complementing the more structured aspects of the interview protocol. By including both types of data collection strategies in the interview protocol, the principal responses were balanced between a focus on explicitly defined standards-based education elements and a more open-ended opportunity for principals to reflect on how they chose to lead in their school setting. This allowed for both comparability across cases while still honoring and interpreting the lived experience of the principal.

Data Analysis Process

I generated interview questions based on the theoretical framework (see Appendix B). I recorded the interviews and transcribed them verbatim. I coded data using some a priori codes based on the theoretical framework, but I also generated other codes to reflect emerging themes from the interviews. By keeping the interviews semi-structured, other themes of import emerged through the sense-making process that were novel and unexpected. I used computer assisted qualitative data analysis software (CAQDAS) software to analyze the data, specifically the Dedoose program, which provided strong data encryption practices. I employed analytic strategies including writing analytic memos, reading the interview data in two different ways (by topic and by participant), and using “pattern matching” (Yin, 2014, p. 143), comparing the empirical patterns to the predicted sensemaking and frame analysis patterns. I made cross-case comparisons and
findings after considering the themes within individual cases. I used analytic memos
during individual interviews to develop initial interpretations, and during cross case
analysis to compare emerging themes across cases after all data was collected.

I implemented member checking for interpretive validity after all three interviews
were completed. I shared my interpretations with the participants, including the excerpts
that I used in the findings to verify, with the participants, that the interpretations
accurately reflected their responses. This ensured the viability and authenticity of the
data. Participants provided informed consent prior to the study through the sharing of
protocols that clarified the study, including efforts to maintain confidentiality and
anonymity (see Appendix D). Participating schools and districts were not identified by
name. I represented the findings in ways that mitigated the possibility of participants
being identified, given the small population in the study region. This included providing
the participants with pseudonyms and designing certain sections of the findings to
eliminate direct attribution to a specific principal. This level of anonymity was important
when the principals were reflecting on the influence of district personnel such as
superintendents or curriculum specialists. I kept identifying data for participants separate,
confidential, and secure.

Limitations and Delimitations of the Study

This study was limited by a number of factors, including a small sample size,
national variability about the understanding of standards-based reform, and a novel
conceptual framework that I developed. The small sample size from a limited region of
Maine should be taken into account when generalizing the findings to other settings. In
addition, standards-based reform, as outlined in the study, exists in a complicated mix of
policy, research and practice. As such, there is no clear model and language that is used consistently across the nation, and that lack of consistency was a factor with even this small sample size. Although I made efforts in the research design to clarify terms and elements of a standards-based model, it is still possible that the results may reflect a discrepancy in understanding between researcher and subjects. I organized my study around a novel theoretical framework that although grounded in established research, is my own creation. I made efforts to reduce researcher bias by using card sorts as part of the interview protocol, providing some boundaries on the interview questions and increasing comparability across cases.

This study was delimited by my decision to interview only four practicing middle school principals in Maine instead of all principals. This made the study manageable for me to complete. In addition, my study examined one model for school reform, standards-based education, so care should be taken when generalizing the results to all forms of school reform. This study was undertaken in the United States public education system and does not reflect an examination of applicability in international settings.

**Role of the Researcher/Trustworthiness**

My decision to spend a substantial amount of time with each principal was an important element of this qualitative research design. The time spent with each principal ensured that I accurately reflected their understandings in the findings. Lincoln and Guba (1985) call this *prolonged engagement* a feature that enables the researcher to “detect and take account of distortions that might otherwise creep into the data” (Lincoln & Guba, 1985, p. 302). In addition, I made efforts to verify and corroborate data by creating a strong theoretical framework to ground the data collection and analysis. In this, I
followed the guidance of Yin (2015), who suggests that researchers should “always seek to develop converging lines of inquiry about all your research actions and assumptions” (Yin, 2015, p. 287).

In all aspects of the research, including data collection and analysis and confidentiality, I followed generally acceptable research methods and protocols. I transcribed interviews verbatim and made comparisons across all interview subjects. I treated participants in a fair and ethical manner, with the sole purpose of accurately representing their understandings and perspectives to answer the research questions posed in the study.

As a practicing middle school principal in Maine, I am also professionally immersed in the issue I explored, and as such I have a unique understanding of the specific policy they were asked to interpret, and the challenges they faced in leading their buildings. This lens allowed me to understand and connect with my interviewees. At the same time, I needed to carefully distinguish their experiences and perceptions from my own, and find a balance between empathizing with their experience and leading their responses to align with my own stance.

**Risk, Protection and Confidentiality**

I did not identify participating districts and principals by name at any point during the data collection process, and I took steps to protect the confidentiality of the research subjects at all points during the data collection and analysis process. This included storing all interview data and identifying information in a secure cloud setting and providing a pseudonym for each interviewee and school and district in all data analysis. I transcribed audio recordings using the online Rev.com platform. I later erased audio
recordings from Rev.com and transferred them to a secure cloud setting at the University of Southern Maine (USM). Rev.com signed a non-disclosure agreement, which I filed through the USM IRB process.

Although the risk to the participants during the interview process was minimal, and no more than one encounters in daily life, there may be a risk that a principal or district will be identified by process of elimination. The research site of Maine is a low population state, and as a result, not only do many principals know each other, but it is possible that the specific responses of the principal may allow for identification. In writing up my findings, I took care to mitigate the possibility of participants being identified. I kept identifying data for participants separate, confidential, and secure. Although there was no direct benefit to participants in the study, the findings from the study may be of benefit to future middle school principals and state policymakers.

The methodology of this study was designed, through a novel theoretical framework, to describe and analyze how middle school administrators made sense of their role in leading the adoption of standards-based educational practices in their schools. I also wanted to identify how the forces of belief and accountability influenced the leadership choices made by principals. Through a comparative case study approach, I examined the beliefs and interpretations of four middle school principals in Maine. The principals were in varying stages shifting to a standards-based educational model, as they led their buildings in response to new educational policy. The findings shared in Chapter 4 will illuminate the sensemaking of these principals, which will lead to a discussion of the key findings in Chapter 5.
Chapter 4 Review of the Findings

Introduction

The purpose of this study was to describe and analyze how middle school administrators made sense of their role in leading the adoption of standards-based educational practices in their schools. I applied a theoretical framework that aligned belief in the value of standards-based education with the accountability administrators felt from the district/state to lead the change to standards-based education, in an effort to identify how these forces influence the leadership choices made by principals. The research was grounded in the theory of sensemaking (Weick, 1995, 2000), based on research that explores how educators interpret new educational policies and ideas through their own mental models, and that the fidelity of implementation of a policy is likely determined by these deeply held perceptions of their role in the change process. Spillane, Reiser, et al., (2002) focused on educational sensemaking, noting that

what a policy means for implementing agents is constituted in the interaction of their existing cognitive structures (including knowledge, beliefs, and attitudes), their situation, and the policy signals. How the implementing agents understand the policy’s message(s) about local behavior is defined in the interaction. (p. 3)

To illuminate how middle school principals understood standards-based education, and made leadership decisions in their schools, I explored principal sensemaking through the interaction of these three elements, characterized as individual cognition, situated cognition, and the role of policy representations (Spillane, Reiser, et al., 2002).
The research also leveraged a frame analysis approach (Benford & Snow, 2000; Snow & Benford, 1988), and state level policy implementation work by (Coburn et al., 2016), to consider how the alignment of belief and sense of accountability interact as elements of principal sensemaking around standards-based reform leadership. Through in-depth interviews and a comparative case study approach, I examined the beliefs and interpretations of four middle school principals in Maine, in varying stages of making the shift to a standards-based educational model, as they led their buildings.

The specific research questions that grounded the study were:

- How do middle school principals make sense of their role in leading standards-based educational change?
- How do the forces of
  - their belief in the value of the standards-based education and
  - their accountability to the district and state to create change,
  affect their leadership practice in the school?

I will structure Chapter 4 to highlight both individual principal sensemaking, and comparative themes that appear to shape the sensemaking of the principals. At times I highlight each principal, individually, when considering their beliefs about an ideal school, or their school successes and their leadership priorities in their school setting. In other sections, I highlight the principals’ perspectives through emerging themes, such as their intertwined understanding of elements of standards-based instruction, or considering strategies principals use to guide teachers towards the priorities they had identified. Because the study site in Maine is sparsely populated, some sections will highlight principal perspectives without identifying the individual principal, particularly when
considering principal influences within the context of their district. For example, if a principal shared specifics about how the turnover in district administrators shaped his or her perspective, attributing those comments to the individual principal may compromise confidentiality, as it may make the district and principal known to specific readers.

Through this variety of structures throughout the sections of Chapter 4, I seek to most effectively tell the story of the individual administrators, both individually, and in comparison.

The four Maine middle school principals interviewed represented a mix of gender, and all fit the study criteria – they were a minimum of three years into their tenure as principal of their school, and they had been administrators in a prior school. Two of the four principals had experience as administrators in states other than Maine, lending a more nuanced perspective of Maine standards-based reform efforts. All the schools were engaged in the work of evolving their standards-based practices, and all had some elements of these practices already deeply embedded in their school culture. All the principals who participated in the study provided informed, thoughtful, and reflective perspectives, lending depth and validity to the study.

The findings explored in this chapter are organized in a way that seeks to highlight the principals’ sensemaking around standards-based practices, and illuminate the key findings for each research question as they emerge. Because the findings for the second research question are embedded in the evidence of principal sensemaking that answers the first research question, I will explicitly address findings for both research questions in the summaries that conclude each subsection, and in a final section of the chapter. The first section of Chapter 4 focuses on how principals make sense of leading
standards-based educational change, including identifying essential elements, describing their ideal school, reflecting on how their beliefs emerged, and how they characterize the leadership moves they make to bring about change in their school. In the second section, I explore the ways in which district and state accountability policies influenced principal leadership choices around standards-based practices. In the final section, I provide a summary of the findings organized by research question, allowing me to glean the strongest themes from the broad sweep of principal perspectives, and retrain my focus on the questions driving the study.

One important contextual issue that emerged as data collection was underway for the study was the passage of LD 1666, *An Act to Ensure the Successful Implementation of Proficiency-based Diplomas* that repealed the mandate requiring Maine high schools to award a proficiency-based diploma to high school graduates. This action occurred as the interview process was underway with principals. Although questions related to this change were not part of the interview protocol, and all principals were only beginning to consider the influence of LD 1666 on their principal leadership priorities, anecdotal reflections are included in the findings, to help illuminate the principal perspectives and provide potential fodder for future research.

**Making Sense of Leading Standards-Based Educational Change**

This section examines the principal sensemaking that forms the evidence for answering both research questions. The first research question is answered using evidence from the interviews with each principal for each of the three facets of the theoretical framework, individual cognition, situated cognition and the role of respresentation. Much of this evidence is also used to answer the second research
question, which asks how the forces of the principal’s belief in the value of standards-based education and their accountability to the district and state to create change affected their leadership practice in the school. To tell the story, I first explore the principals’ understanding of the elements of standards-based practices. I want to ascertain common understandings of these practices which makes comparisons across districts and principals easier. Second, I examine the principals’ individual cognition, particularly their beliefs around the value of standards-based practices and the influences that shaped those beliefs. Third, I focus on the principals’ situated cognition in the context of their current school building leadership. This subsection considers how principals lead standards-based reform efforts, including how they prioritize their leadership moves and motivate teachers into action. The summaries provided at the end of each subsection will highlight the findings by research question, to focus the emerging picture of principal sensemaking that supports the key findings that are discussed in Chapter 5.

Standards-based reform elements. Since standards-based instruction, in practical implementation in schools, may include a variety of elements and interpretations, I asked the principals, as part of the study protocol, to identify essential elements of a standards-based instructional model through the forced choice of a card sort (Appendix C). I gave the Principals a set of eleven elements of standards-based education that were intended to reflect the most common understanding of standards-based practices in schools. I asked the Principals to sort the elements into three categories based on their understanding: Essential Element, Nice To Have Element, and Non-Essential Element. This approach also allowed me and principal to develop a common understanding of the language used in the school, and provided further clarity
about how the principal understood and communicated their interpretation of standards-based practices.

The data from this card sort is included in Table 2 *Card Sort – Essential Elements of Standards-Based Education*, which revealed that although many of the elements of standards-based practice deemed essential were shared by the principals, there was also variation in the understanding of and importance placed on the various elements.

<table>
<thead>
<tr>
<th>Standards-Based Element</th>
<th>Principal Red</th>
<th>Principal Blue</th>
<th>Principal Black</th>
<th>Principal Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students must have multiple opportunities to demonstrate what they know - they should always be allowed to redo tasks and retake assessments (learning as constant, time as variable)</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>If asked, students must be able to describe the standard they are working towards in class (clarity).</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Nice To Have</td>
</tr>
<tr>
<td>If asked, students must be able to describe what they personally need to do to meet the standard, based on teacher feedback or student self-assessment (feedback).</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>All standards must be broken down to a set of learning targets that are shared with students (clarity).</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>All teachers in a content area and level must use the same set of learning targets (consistency).</td>
<td>Not Essential</td>
<td>Essential</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>Students must have a variety of assessment options to demonstrate what they have learned (multiple pathways to mastery).</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Essential</td>
</tr>
</tbody>
</table>
Students must have opportunities to get reteaching or other intervention opportunities if they still aren't demonstrating mastery of a standard (learning as constant, time as variable).

| Students must not move on to the next standard if they haven’t shown mastery of the prior standard - learning tasks should always be personalized to the needs of the individual learner (personalization). |
|---|---|---|---|
| | Essential | Essential | Essential |

In the grading system, students must have mastery of standards (what they can show in assessments) separated from work habits (how they get there, such as homework completion) (clarity and assessment).

| Students must be allowed to have as much time as they need to demonstrate mastery of a standard (learning as constant, time as variable). |
|---|---|---|---|
| | Nice To Have | Essential | Not Essential |

Students must have a non-traditional grading system - not a 0-100 scale or A-F letter grades (assessment and reporting).

| | Nice To Have | Nice To Have | Nice To Have |

I explore the commonalities by element in the next sections, to best illuminate a comparative understanding of the principal sensemaking around these particular elements of standards-based reform. Of the elements that were offered to principals (Table 2), commonalities emerged with the following; intervention systems, standards to learning targets, separation of work habits from content knowledge, grading systems, and time and personalization. I examine these individually in the next sections.

**Intervention systems.** The greatest commonality between principals was the practice of providing opportunities for reteaching or other intervention opportunities for students. All claimed this was an essential element in their belief about standards-based
systems. Principal Red noted: “Students must have opportunities to get reteaching or other intervention opportunities if they still aren’t demonstrating mastery, absolutely. It’s like otherwise we just teach and move on and leave people behind and that’s not okay.” Principal Green shared,

If it’s about the learning, then they should have another opportunity to learn it, not just a ‘one and done’ type of thing, especially if we want them to own it and sort of be invested in it. It’s the same with re-teaching or other interventions. I think that’s not only a component of proficiency-based learning, but just good teaching, as not everybody’s going to get things the first time. Which isn’t the system that we really started off with in education years and years ago.

Principal Blue shared the concept of providing additional opportunities as she noted, “I want teachers and students to have dynamic classrooms where they have....multiple opportunities, intervention. Going back to relearn, reteach ’til they’ve got it.” Principal Black saw it as an essential part of his school as well, stating, “retaking and intervention - definitely part of the system.” All principals shared the structures they created in their schools, such as flexible blocks that allowed students and teachers to have opportunities for re-teaching and re-learning. The commonality of these structures supported their conviction that they were essential to their instructional models.

Standards to learning targets. Another area of commonality around essential elements of a standards-based system included the use of shared standards that are broken down into learning targets for students. Although the elements of shared standards and learning targets were consistent, I found that language and descriptors were inconsistent,
as different schools uses different terminology in their systems. In asking principals for clarification around their choices, their individual perspectives around the importance of shared standards became more obvious, as did their wonderings about the variable terminology. Although Principal Red deemed the element about all teachers sharing the same learning targets as non-essential, she clarified by stating, “Because the standards need to be the same, but the actual learning target, to me that means the lesson learning target could vary from classroom to classroom as long as you were still working toward the same ultimate standard in the end.” Principal Black shared,

So, the must for me was all teachers have to have the same set of standards in a content area. That's the whole point of standards, so we're doing common things. All standards should be broken down into learning targets.

And that's really what the kids should know about and understand, like what is the learning target for this assignment, this assessment?

Principal Green shared his perspective of learning targets as an essential component of a standards-based system, sharing that standards should be,

broken down and shared with students, yes. I think that if it's something that's large, it should be broken down into pieces. I think the whole idea ...

sort of a non-negotiable of proficiency-based learning is that the learning targets are clear to kids. They're transparent.

For Principal Blue, the fundamental belief in the value of sharing standards and learning targets with students extended from her own school to her ideal school. She shared,

So I think I would start with the clear scope and sequence of what we were doing. The clear scoring guidelines to go with all of that. And the
expectation that standards would be broken down to learning targets. Those three are the curriculum side. That's really what we started with….Creating that, because that was not in place when I got here. The challenges of common terminology persisted among the principals, however, the fundamental use of standards to guide instruction was essential to all of them.

*Separation of work habits from content knowledge.* One final area of commonality was around the separation of student work habits from student content knowledge in the grading system. This element also became muddied by the challenges posed by standards-based grading, which I explore later. Principal Red shared, “In the grading system, students must have mastery of standards what they can show in assessments separated from work habits. How they got there. Absolutely. To me that's a nonnegotiable.” Principal Blue noted: “I think that the separation of work habits and standards is perhaps among the most crucial and that's kind of where my thinking and my transitioning [to standards]...started.” Principal Green shared, I do think in proficiency-based education, they should be separated so that you can see [them] ... I think they're two different skills. One is really your ability to demonstrate learning, and the other one are more of the soft skill I think around organization and being able to use class time wisely and those types of things.

This concept of separating content knowledge from student work habits is often considered a unique and fundamental aspect of a standards-based grading system, and the principals in the study echoed this perspective in their responses.
Grading systems. The discussion of work habits separated from content knowledge in a standards-based system revealed the principals’ deeper perspectives about grading systems. Standards-based grading and reporting, as the more public element of standards-based systems, can be an area of angst for principals, as they struggle with helping teachers and parents understand and support the system.

As standards-based grading systems were not an explicit focus of the study, I examine it briefly here. The interviews revealed that grading systems were deeply intertwined with both principal belief systems, and the pressures of accountability that they faced, so I explore sensemaking around grading practices more deeply in subsequent sections of the findings and analysis.

All the principals reported that they have at least some elements of standards-based grading in their schools, with most having robust systems that do not utilize A-F letter grades or a 0-100 grading system. Yet, as the card sort data reveals, no principal reported a standards-based grading system as an essential element of a standards-based system. Principal Red states,

Must they have a nontraditional grading system? No. I don't think so. I think it's nice when we can be more descriptive in the terminology that we use for reporting student learning, but I think you can still teach towards standards and learning targets while using the A through F letter grades.

Principal Blue, describing grading, shared; “We get so hung up on it and I understand why we get so hung up on it, but I think you probably can have a PBL [proficiency-based
learning] system shoehorned into a traditional grading system.” Principal Green noted the importance of clarity in the system, stating,

You could call it bananas, apples, and oranges in terms of what kids got, but it needs to be clear. As long as it's clear what the expectation is, so if it's 100 [point] scale or four-point, [it is] being clear with what the expectations are. All you're doing is just putting a different title above what it is you expect kids to do.

Principal Black echoed this sentiment, sharing it was both important to him, and a missing element from standards-based systems to have “a grading program that people understand.”

Sensemaking regarding grading was universally difficult for the principals in the study. Grading practices, and the challenge to develop understanding with teachers, parents, and students, as well as communicating effectively with reporting tools, was a common theme throughout the interviews. This was one area where their interpretations differed as to whether or not a non-traditional approach is an essential element in a standards-based system.

**Time and personalization.** One area of interesting commonality among the principals coalesced around the notion of time and personalization in standards-based instructional systems. All the principals questioned the practicality of allowing students either unlimited time to learn material, or of requiring that teachers personalize all content to the immediate needs of the learner. Although they generally noted that unlimited time would be an ideal approach for students, and Principal Blue noted it is as an essential element for this reason, stating that they get “as much as time as they need” -
in general they saw challenges with allowing unlimited time for learning. Principal Green shared,

The time piece, I think in an ideal world we had all the time in the world.... That's not what we're in, though, so that's not the reality, and that's not the reality of the work that most people do when they get out of education or move onto the real world.

Principal Black echoed with “and, once again, there needs to be some structure to the amount of time kids have to get to certain places.”

When considering the element of personalization of learning, all principals saw it in a similar light - possibly ideal - but they just didn’t see how it was possible to do it well in public school systems. Principal Red shared, “Learning tasks should always be personalized to meet the individual learner. Again, sometimes it can't be. Sometimes it's not appropriate. If it's on a grand scale, the idea is that we're trying to individualize this, but it doesn't always have to be.”

For two principals, actually seeing public schools in Maine that were attempting this approach, influenced by the Re-Inventing Schools Coalition (“Reinventing Schools Coalition,” n.d.) and the work of the Maine Cohort for Customized Learning (“Maine Cohort for Customized Learning,” n.d.), caused them to dismiss this element as non-essential. Principal Black states, “I just didn't see it as manageable for teachers. And didn't see it as good for kids. And so I kind of had that as not a possibility in my mind, just from seeing how hard it was on teachers.” Principal Green viewed it as,

You work at your own pace, and now everything is a packet because ....they all come different places and I have to meet them when they are.
Well, you're on packet A, and you're on packet D. And that was sort of the extreme, but I think that muddied the waters a little bit.

Principal Blue shared that when she was talking to a colleague about the idea of eliminating grouping students by age, thus allowing students to advance based on mastery, "I'm also thinking, I [would] have some eighth graders still hanging out in fourth grade. Yeah. I was like, that's awful." These perspectives from the principals reflect the challenges of tradition, with regard to age-based grade levels, and the constraints of time in public school systems as new instructional models clash with existing models.

**Summary of standards-based reform elements.** The evidence from this section highlights an emerging key finding related to principal sensemaking in the first research question, which is the challenge that the use of language related to standards-based practices posed for principals. The commonalities for principals around essential elements of standards-based systems included the use of common standards, providing intervention systems for students who do not demonstrate mastery of standards, and separating work habits from content knowledge in a grading system. But even within those elements, there were differing interpretations of all those elements, highlighting the challenges in supporting educator sensemaking in complicated reform efforts. Grading systems posed a particular challenge for the principals, which I explore more deeply in a subsequent section. The principals articulated common challenges with some of the ideals promoted with standards-based systems, such as allowing unlimited time and personalizing learning to the learner. Although they could recognize the ideal, they struggled to fit it into the school systems in which they were working on a daily basis,
and thus rejected these elements as non-essential in a standards-based system. This finding has implications for policy implementation as well, which will be examined in Chapter 5.

**Individual cognition – their ideal school.** With a common understanding of specific elements of standards-based practices in place, I examined the individual cognition of the principal related to an ideal situation. I asked principals to consider what they would prioritize in an ideal school that they could lead. I wanted to better understand how individual principal beliefs in standards-based reform efforts are developed. I provided each principal with a list of standards-based practices similar to the first card sort (see Appendix C and Table 3). I asked each principal to prioritize the practices in terms of how they would lead their “ideal” school, including having the option to exclude any or all of the elements entirely.

I predicted that if principals identified many elements of standards-based instructional practices as important in an ideal school, it would indicate a strong belief in the value of these practices as opposed to simply complying with policies to advance them in their schools. Their choices of standards-based instructional practices would shed light on each principal’s individual sensemaking - how do the school practices I am trying to advance align with my personally held beliefs about what is best for students?

The data from the card sort that principals were asked to complete that characterized their ideal school is included in Table 2 *Card Sort – Their Ideal School.* The findings from principals revealed strong alignment in their perspectives about essential elements in standards-based practices to practices that they would include in their “ideal” school,
although there was also some variation in their perspectives, which will be discussed in the summary section, after the individual findings for each principal are examined.

Table 3

<table>
<thead>
<tr>
<th>Standards-Based Element</th>
<th>Principal Red</th>
<th>Principal Blue</th>
<th>Principal Black</th>
<th>Principal Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create an expectation that teachers provide multiple opportunities for students to demonstrate what they know - they should always be allowed to redo tasks and retake assessments (learning as constant, time as variable)</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>Creation of a clear scope and sequence of learning standards across the school (clarity and consistency)</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Nice To Have</td>
</tr>
<tr>
<td>Creation of clear scoring guidelines for all learning standards (clarity and consistency)</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>Create an expectation for teachers that students must be able to describe what they personally need to do to meet the standard (feedback).</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>Create an expectation that all standards must be broken down to a set of learning targets that are shared with students (clarity).</td>
<td>Essential</td>
<td>Essential</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>Create an expectation that all students must have a variety of assessment options to demonstrate what they have learned (multiple pathways to mastery).</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Nice To Have</td>
<td>Essential</td>
</tr>
<tr>
<td>Development of an intervention system that allows students to have opportunities to get reteaching or other support if they still aren’t demonstrating mastery of a standard (learning as constant, time as variable).</td>
<td>Essential</td>
<td>Essential</td>
<td>Essential</td>
<td>Essential</td>
</tr>
<tr>
<td>Create an expectation that all students must not move on to the next standard if they haven’t shown mastery of the prior standard - learning tasks should always be personalized to the needs of the individual learner (personalization).</td>
<td>Essential</td>
<td>Not Essential</td>
<td>Not Essential</td>
<td>Not Essential</td>
</tr>
<tr>
<td>Develop a grading system that allows students to have mastery of standards (what they can show in assessments) separated from work habits (how they get there, such as homework completion) (clarity and assessment)</td>
<td>Essential</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Essential</td>
</tr>
<tr>
<td>Create an expectation that students must be allowed to have as much time as they need to demonstrate mastery of a standard (learning as constant, time as variable).</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Not Essential</td>
<td>Not Essential</td>
</tr>
<tr>
<td>Development of a non-traditional grading system, not a 0-100 scale or A-F letter grades (assessment and reporting)</td>
<td>Nice To Have</td>
<td>Essential</td>
<td>Nice To Have</td>
<td>Not Essential</td>
</tr>
</tbody>
</table>

**Principal Red.** Principal Red’s, ideal school revolved more deeply around standards-based practices, with an emphasis on knowing and tending to the individual learner. An immediate reaction to considering her ideal school was, “If I’ve hired teachers who are so all into this and we have the flexibility to really individualize learning, there’s a lot we can do.” She identified, as high leadership priorities, eight of the eleven standards-based elements provided to her for consideration and identified the other three as medium priorities. No elements were considered to be low leadership priorities. When I reflected back her strong alignment to standards-based practices, she validated her support, stating,
You come to school for learning. Our purpose is learning. It's all about learning so we need to maximize that and clarify that for learners. What are you learning? How does one task dovetail into another task create a third learning event? So, how is learning integrated with itself? You as a learner are unique, so I want you to understand yourself as a learner and I, as your instructor, would want to be able to understand you as a learner. So, let's figure that out together. When you walk out the door whenever you're finished with being a part of this learning organization..... I want you to not need me anymore.

Principal Red clearly sees the role of school as providing the learners with an awareness of his or her individual strengths and challenges in school.

Her theme of the individual learner continued as she considered the concept of time. "In an ideal school, time is not a constraint." Like the other principals, she struggled marrying the practical realities of a time constrained public school with the ideals of standards-based programming, which have a more fluid concept of time and learning. "Not everybody learns everything by 10:00 AM on Tuesday morning....I'm going to learn it three weeks from now because I just need more time. To me that's the essence of this approach. It's the essence." She clarified even further by stating, 

If you function best between 7:00 AM and 11:00 AM and you can achieve the things that we've all set out for you to achieve or you set out to achieve over the course of a week or a month within those hours, who am I to say that you need to stay until 2:30 or 3:30? You know? Or vice versa. Some people they need to sleep in the morning so why can't you come in later?
If learning is about the individual, then let's make it about the individual.

Let's make it compatible with the individuals strengths and needs.

She noted that in her ideal school she would also prioritize learning through a focus on families.

The individualization of the learning experience is really important. The partnership with families is really important because in a child's life, between family and school, that's their world. So, partnership with families needs to be super strong and clear and fluid. We are all here for this child.

In considering some of the aspects of standards-based practices that she would not emphasize as much in her ideal school, Principal Red identified the creation of shared scoring guides for standards in that category. Often considered a key element of standards-based instruction, she reflected a more nuanced approach to their importance, stating "to me, there's just some flexibility in scoring. So, this feels more rigid to me. But that's because I'm not rigid about very many things. But I understand that sometimes you might need to be." Principal Red, while clearly being aware of their importance, also seemed to value the role of the teacher in knowing the individual students, and using professional judgement to best assess their individual learning. Principal Red's strong focus on the individual student learner, coupled with her reinforcement of her prioritization of standards-based practices, indicated a strong personal belief in the value of these instructional approaches.

**Principal Blue.** In her ideal school, Principal Blue’s leadership priorities were the same elements as in her first reflection on the essential elements of a standards-based
system. She emphasized the clarity of standards and learning targets, an intervention system, separation of work habits from content knowledge, and more flexibility with time on learning. She did not retreat from standards-based practices in her ideal school and noted when the elements in her current school aligned with her ideal school. Principal Blue stated that her current school reflected her ideals in some ways, stating “I did get to choose what the expectations are.”

Some of her leadership’s lower priorities were around “scope and sequence….and a grading system”, clarifying that some of these lower priority elements are “good teaching, so a good process for teaching and learning.” She shared that, in contrast to her high priority tasks, “so it’s not like these things aren't important, but that… I think a lot of these things will happen if you're doing this [her high priority elements].” This clarification of her perspective on the role of curriculum elements in her system provided further evidence of her investment in many elements of standards-based systems.

Additional priorities in Principal Blue’s ideal school was a focus on the culture of the school, and providing experiential learning opportunities for students. “Well, I think culture is so important. Fun and joy. It is our culture of the school….that a student would want to be here….and the teachers want to be here ... so developing that culture piece I think is critical.” Her ideal school would also include,

Definitely active and experiential learning being…..embedded in this.

That it would minimize sit and get, although there's always some of that that has to happen. But making projects and this variety of assessments concept would be really robust in terms of the learning, how we learn, the delivery methods.
Although Principal Blue didn’t highlight the individual learning experience as directly as Principal Red, she did note the importance of involving all stakeholders in the school. A leadership priority for Principal Blue included students and parents, “communication and involvement of stakeholders. Then everybody would feel a part of it.” Principal Blue’s focus on building school culture through strong communication was echoed by Principal Black, as he considered his ideal school.

**Principal Black.** Principal Black’s ideal school features clarity and communication. Like Principals Red and Blue, his alignment between what he considered essential elements of standards-based practice and what he would prioritize in his ideal school was very close. But unlike those principals, his first priority was having a clear curriculum.

I think I would start with a clear scope and sequence of what we were doing. Clear scoring guidelines to go with all of that. And [have] the expectation that standards would be broken down to learning targets.

Those three are the curriculum side.

He wanted to focus on creating a variety of assessment options, and providing feedback to students, as well as building a robust intervention system to support learning. Lesser leadership priorities are issues around grading, including separating content mastery from work habits, and time and personalization of individual learning, noting both “the grading system is not a huge battle for me”, and “there needs to be some structure to the amount of time kids have to get to certain places.” When I reflected that his ideal school looks a lot like his leadership priorities in his current school, he agreed, stating that he would “just do better at it.”
Principal Black explicitly stated that communication was an area of vital importance that could always be improved. He wanted to prioritize “communication about what we’re doing, why we’re doing it, what it looks like.” He said “more and more effective communication directly with parents”, included more conferences, and a better narrative reporting system. He also wanted an emphasis on student communication by working “with kids to talk to their parents about it more. Because the kids get it.”

In his ideal school, with more resources, Principal Black wanted “better explanations on the website of what the system is, what the curriculum is, examples of assessments.” But with his limited time available for this sort of work as principal of his current school, his ideal school would “have someone doing that.” Another area of leadership priority for Principal Black would be to create a more experiential school. “That hands-on, project-based, doing” approach, where classrooms would “always have an interdisciplinary project going on.” The importance of experiential learning for middle school students was a priority for Principal Black, Principal Blue and Principal Green as he considered his ideal school.

**Principal Green.** Like the other principals, Principal Green’s ideal school was closely aligned to his perspective about essential elements of standards-based practices. Unlike the other principals, he immediately identified that the qualities of his ideal school would be shaped by the needs and interests of the stakeholders, noting that “some of it would depend on what the stakeholders….are looking for in terms of an outcome” and that he would want clarity about “what are we trying to prepare kids for specifically.” This willingness to flex and adjust based on evolving needs seemed an integral part of
Principal Green’s sensemaking, indicating that he was keenly attuned to balancing the capacity of the system with the needs of students, even in his ideal school.

Principal Green also had strong beliefs in experiential learning for students, in conjunction with standards-based practices. “I think things would be way more engaging for kids if school was less compartmentalized and more scenario based or expedition based.” Like his peers, Principal Green noted that in his ideal school, he would have more time and resources.

In an ideal world......all the standards or the skills that you’re being taught are so that you can.... create some type of product because you’re solving some type of problem or you’re creating something. So if you didn’t get that....it would be nice if you could just go, "I’m just going to need a little bit more help with that today," then you can work with somebody specifically that could help with that. I think that would kind of be the idea behind it that... it would seem more real-life based, experiential, expedition based, with a variety of different ones. More exploratory for kids.

Principal Green’s high leadership priorities concerned the needs of the stakeholders. “It depends on what you're looking for. If what the school is selling is this....highly engaging experiential type of learning, then [priorities] could probably migrate a little bit more.” As he reflected on the curriculum elements of his ideal school, he noted the importance of stakeholders,

going back to.....the stakeholders and we want kids leaving here to know these things, to be able to do these things, then we kind of work backwards
in terms of having the sequence down, the scoring guides, everything broken down for students.... So it's clear to the kids.

Like Principal Black, Principal Green sees curriculum elements as preparing students for the next level of learning,

the design of what kids are learning over time...as more of a...foundational piece. We need to make sure that they're learning these things. How do we know? What are we trying to teach them, and if there's a progression within the school that the sixth grade are getting these standards so that they can be ready in seventh grade so that they can be ready in eighth...I think things could fall apart really easily....[if] people aren't on the same page about [this].

Principal Green saw the separation of habits of work from content mastery as lower priority leadership tasks, “I don't think in my ideal school that it would go downhill if there wasn't a separation of habits of work or if there was.” But he clarified his belief that it was more valuable for teachers to have conversations with students about the choices they made and the impact on their learning, noting that, “to me, it's a conversation that has more importance than anything else.” Other lower leadership priorities were all learning being personalized to the individual, time being always flexible, and grading being non-traditional.

Finally, Principal Green’s high priority leadership tasks are “the classroom culture and the climate. Those are things that I think are really, really critical to have just kids feel comfortable and safe, and those are ...high priority types of things.” He shared that he wants students to love school “because they developed a relationship with the teacher.
They did some fun activities. They got to know other kids. They felt excited about being there. They wanted to be there.” His focus on school being an engaging and experiential place for students was a thread throughout his reflections, and seemed to be the basis of his belief system about teaching and learning, with the elements of standards-based practice being important, but not the heart of his ideal school.

Principal Green seems grounded in student-centered learning, but was more passionate about the power of project-based learning as an organizing model for both his ideal school, and his current school. While recognizing the importance of standards-based curriculum elements, his sensemaking around high quality teaching and learning seems much more driven by his own experience with seeing the impact of project-based learning for students and teachers. By attending closely to stakeholder needs, he seems to find some fluidity in how he would shape priorities, although the passion for experiential learning seems to be a significant influence on his leadership priorities.

Their ideal school summary. The evidence provided by principals both illuminates their sensemaking related to the first research question, but also supports a key finding from the study related to the second research question - the idea that a principals’ belief in the reform efforts that they are tasked with enacting is a substantially stronger influence on their leadership priorities than a sense of accountability they may feel. This picture emerges most vividly as principals consider their ideal schools. My intention of asking principals about qualities of their ideal schools was to illuminate their individual sensemaking, apart from their current principalship. If principals identified many elements of standards-based instructional practices, it would indicate that the belief in the value of these practices transcended simply being expected to advance them in
their schools as part of their role. In addition, it would shed light on the individual sensemaking of the principal - how do the school practices I am trying to advance align with my personally held beliefs about what is best for students? The findings from principals revealed strong alignment in their perspectives about essential elements in standards-based practices to practices that they would include in their “ideal” school. This indicates that either they are unable to separate their ideas about an ideal school from their experience in their current principal leadership role, or that the beliefs that they carry into their current principal leadership role strongly shape their leadership priorities. Likely, the individual sensemaking of the principals is somewhere in the middle - that they are enacting leadership priorities that align with their beliefs, but it is hard to separate their beliefs from their current experiences.

I found variability among the principals in a number of areas. Three of the principals in the study saw curriculum elements such as clear scoring guides and scope and sequence of curriculum materials as essential to a standards-based model. Principal Red also seemed to value the role of the teacher who could use his or her professional judgement about individual students to best assess their learning. Principal Red’s focus on the experience of the individual learner was stronger than other principals, and seemed to be a key element to her ideal school.

Although not provided as an element for consideration, both Principal Blue and Principal Black offered communication as an essential element in their ideal schools. Both principals wanted more involvement with stakeholders who are a critical component of school leadership. They admitted that in their current roles they often do not enough time to involve stakeholders. Both Principal Black and Principal Green said that
experiential learning, not explicitly identified as a standards-based practice element, was a priority for them in an ideal school.

Principal Green in particular was more fluid in his perspective of an ideal school, noting that it would be shaped by the needs and interests of the stakeholders. He focused on school being an engaging and experiential place for students throughout his reflections, which seemed to be the basis of his belief system about teaching and learning, with the elements of standards-based practice being important, but not the heart of his ideal school. Overall, the principals demonstrated a strong alignment to standards-based practices in their ideal schools. Principal Black summed it up when I reflected to him that his ideal school looks a lot like what he prioritizes in his current school. He agreed, stating that he would “just do better at it”, reflecting the perspective of the other principals that they are leading their buildings with integrity to their own ideals and beliefs, and that the individual beliefs that they carry into their current principal leadership role strongly shape their leadership priorities.

**Individual cognition – the influence of direct experience on leadership beliefs.**

In the second section of findings related to the principal’s individual cognition I examine the role of direct experience as it influenced the principal’s leadership actions. Asking principals to reflect on what influenced their emerging beliefs about standards-based practices served two purposes. First, it deepened the understanding of how deeply their individual beliefs were anchored, providing evidence to illuminate the sensemaking process that informs the first research question. Second, their reflections on how the influence of direct experience shaped their individual beliefs illuminates the cognitive process that moves a principal to adopt new ways of thinking about teaching and
learning. This informs a process of educational policy development that would leverage the impact of direct experience to improve implementation of standards-based practices, and provides support for a policy recommendation in Chapter 5. The findings for each principal in this second section about the influence of direct experience are considered separately with a summary provided at the end of the section that highlights how the evidence provided supports the first research question as well as a policy recommendation.

**Principal Red.** Principal Red said that her personal perspective on standards-based practices was deeply influenced by her own experience as an adult learner, after having a traditional K-12 school experience.

> There were so many things about myself that I didn't know. So many things about myself as a learner that I didn't know because I was only taught one way. It wasn't until I started teaching and ...went to a [math] training for a week. It was like, ‘Oh my gosh. Not only do I understand math. I like it, I see the enjoyment in it. I see the beauty in it and I want to go and help people understand math this way too.’ That was a life changer for me.

In another example of a graduate school experience where she had individual control over how she presented her own learning, she said, “to me that was so much more powerful and valuable. So, there's definitely more than one way to demonstrate learning. That's important to me as a learner. Very important to me as a learner.” Principal Red reiterated the importance of her own experience as a learner,
I've come to realize that as a learner, I'm as unique as I am unique as a person. So, the way you learn is different than the way I learn and if I'm being asked to learn something in a way that isn't flexible or there's only way to do this, I find that to be unfair.

Her reflections as an adult learner demonstrate a coherence in her perspective - she could connect her own experience as a learner with what she believes is best practice in student learning, and has consolidated those into her leadership priorities. By having an experience as an adult learner that was counter to her experience as a young learner, she underwent a significant change in understanding. Calling it “a huge shift for me”, she said that the power of actually experiencing the new learning approaches she, as the principal, is supposed to lead works as a leverage point for shifting her leadership behavior.

**Principal Blue.** Principal Blue shared a mix of influences that shaped her vision of an ideal school, and her beliefs about high quality teaching and learning. These included seeing a standards-based model in action in a school visit and the influence (both positive and negative) of professional mentors. Although Principal Blue’s experiences with professional mentors came before she was expected to understand and lead standards-based reform efforts, these mentors influenced her global leadership style that was authentic and student and teacher centered. She characterized a positive mentor as,

He knew every kid. He knew...what was going on in my classroom. He stopped in all the time. He was in the halls all the time. Very visible and very hands on and ...just one of those charismatic people that.... [was]
able to pick out everybody's strengths and say, "You could do this." And he did it with kids, and he did it with teachers.... and he had fun. It was clear that he loved his job and loved being in schools and loved being a part of it and that was very contagious. It was a very fun place to be for kids and teachers.

In contrast, she shared an influential experience in a curriculum-oriented school that wasn’t as positive. “People would say things are happening and we would talk as though things were happening… but that was not what was happening……I saw very little evidence that any of that [work] was changing what was happening in the classrooms.” These reflections point to her focus on the authentic experience of students, which likely support her evolving belief system about the importance of a student-centered instructional system.

She reported that leading her current school is her first experience with standards-based practices, and visiting a high performing standards-based school “sticks in my head as the turning point for me”, sharing that “a lot of things came together in that day” She shared that the experience of listening to the principal and students was deeply influential.

I mean he was talking and we were seeing it. So we were in the classes and we were listening to these students.... talking about their experiences and journey in proficiency-based learning side by side with teachers...I was so impressed with the depths of which students were able to talk about their learning and what they needed to do. It....was a day of.... identifying what I didn't know [that] I didn't know.....Here's this thing I
don't understand, and see how they're doing it there - this is how it works. I can see it in this classroom and at that time, [seeing] something as simple as the teacher posts the learning targets that they're working on every day in the classroom. Now it seems funny that that was so, like ah-ha to me, but it was at the time. Have every classroom, every class start with that.

Principal Blue credits the entire trajectory of her professional experience, particularly the colleagues with who she worked, as bringing her to a point where she can successfully lead standards-based reform in her school. She noted that overall,

it's been kind of a journey in terms of where I've gotten.... And how.... I formed my philosophy or thinking - it's been kind of through all those influences. I feel like here things have come together in terms of great people to work with and...then the right professional development....at the right time.

Principal Blue’s perspective highlights the strategic importance of professional learning, positioning it when the learner is most ready, and considering professional learning sources that have credibility with the learner and are based in direct experience. Principal Blue learned and was influenced by a credible model that she experienced at an ideal time in her learning trajectory.

**Principal Black.** Principal Black, like Principal Blue, noted that visiting other schools and classrooms was a strong influence on the development of his belief system around high quality teaching and learning,. For him, however, it was both positive and negative. He said that the approach some schools took to personalization looked like
providing students with individual packets of work, which he did not see as manageable or effective. But he also noted that

there were definitely some visits that were very positive. Especially with math. Just lining it up closer to the Common Core and how are we are teaching each of these things and breaking it down more. I think that seeing that greater focus is really what I wanted....and they helped the teachers a lot, to see different models that either they liked or didn't like.

Principal Black often referred to building his beliefs alongside the teachers in his school. He noted that when he was hired in his current role,

I was not a PBE [proficiency-based education] person.... It's more learning from practice and realizing a lot of things in PBE I was doing as a teacher anyway. They're just best practice. And I think that we took what we felt was best practice out of PBE and put it in our classrooms.

He said that his current beliefs about high quality teaching and learning were formed as “definitely not a solo journey.....Every big decision, there was teacher support for.” He stated that “without a doubt”, his beliefs have evolved alongside his teachers in his school. He acknowledged that he was most influenced by working with teachers to try new approaches, reflect on them, and then adopt them if they seem more effective.

So, when I started here, I didn't plan to do this. It wasn't like, ‘I'm coming here and this is what I want to do.’ I wanted to get clear standards, clear curriculum targets everywhere. So we put that in place first. And then I wanted to get us to be more hands-on, project-based, and just doing.

Getting outside of the school, and all of that. So we had those two, the first
focus and the second focus. And then we started talking about grading and slowly went toward this.

Principal Black noted that having the time to experiment with new approaches alongside teachers was an important reason for his success in establishing standards-based practices. For him, direct experience with standards-based practices built credibility in the new approaches, and was an important influence in his leadership.

**Principal Green.** Principal Green said that leading experience-based programming in former settings influenced his individual beliefs about effective teaching and learning. Like his colleagues he stated that site visits to schools doing standards-based instruction and assessment, and colleagues who championed project-based learning were important. He shared that student and teacher excitement were meaningful to him, “the conversations with kids, I noticed, started to change”, and that he “had teachers….who said ‘I've never been more excited about teaching than now.'” He admitted that his experience as a teacher shaped his current beliefs, reflecting,

I look back at things, and, again, probably one of the reasons [for my] priorities is I do think I was good at forming relationships with kids and being engaging with kids and thinking about how to deliver something in a way that [for]a middle school kid it would be palatable for them. And so I guess that followed me here because I don't have as much interest in the rubrics and those types of things, but I don't think the rubric's any good to you if the kids aren't engaged.

Principal Green seemed grounded in student-centered learning, but was more passionate about the power of project-based learning as an organizing model for both his
ideal school, and his current school. While recognizing the importance of standards-based curriculum elements, his sensemaking around high quality teaching and learning seemed much more driven by his own experience with seeing the impact of project-based learning for students and teachers. By attending closely to stakeholder needs, he seemed to find some fluidity in how he would shape priorities, although the passion for experiential learning seemed to be a significant influence on his leadership priorities.

**Influence of direct experience summary.** A common thread across the four principals was the role of direct experience, either as a learner or a leader, in shaping their individual beliefs. Principal Green’s sensemaking around high quality teaching and learning seems much more driven by his own experience with seeing the impact of project-based learning for students and teachers. For Principal Red, by having an experience as an adult learner that was counter to her experience as a young learner, she underwent a significant change in recognizing that school leaders must experience the new learning approaches they are supposed to lead. This becomes a powerful leverage point for shifting their leadership behavior. For Principal Blue, visiting a high performing standards-based school, and listening to the principal and students, was deeply influential. Principal Black summarized his perspective by sharing that he was most influenced by working alongside his teachers to try new approaches, reflect on them, and then adopt them if they seem more effective.

For three of the principals in the study, a positive and negative influence was visiting other schools that were undertaking a shift to standards-based practices. They either saw practices that inspired them, especially in the case of Principal Blue, or they saw classroom practices, such as using individual work packets to personalize learning
for students, that they deemed ineffective, particularly Principal Black. Principal Green noted that site visits and colleagues who championed project-based learning were also important. Two of the principals specifically cited author and speaker Rick Wormeli as a strong influence, with Principal Red noting, “because the way he explains things, to me it just becomes fundamental in your understanding of why this is a better approach than something traditional.” Other than Rick Wormeli, the principals did not discuss being influenced by current educational theory focused on standards-based practices.

The findings related to the powerful role experiential learning played in shaping the principals’ personal beliefs about teaching and learning provides evidence to answer both research questions, as well as provides the basis for a policy recommendation shared in Chapter 5. The sensemaking of the principals, the focus of the first research question, is more clear. The influence of their personal beliefs on their leadership actions, the focus of the second research question, is also illuminated through the common thread that emerged between the principals regarding experiences with new ideas and models. Principal Red drew on her experience as a learner; Principals Blue and Green leveraged the experience of seeing models in action, and Principal Black grew from seeing ideas and then collaborating with teachers to put them into practice in his school. As the sensemaking picture for these principals becomes clear, the value of engaging in actual experiences, as opposed to being provided theory, becomes more apparent, and is the basis of a key finding supporting the strong influence of principal belief in enacting reform efforts.

**Situated cognition – leadership successes and priorities.** In the first subsections of findings in Chapter 4, I focused on the principals as individuals. I
analyzed the sensemaking that shaped their individual beliefs around standards-based education, including how they characterized the influences that informed their beliefs. In the next two subsections, I focus on the situated cognition of the principals. My analysis positions them explicitly as leaders in their buildings, making decisions about which elements of standards-based practices to prioritize. These subsections lean on principal leadership research, specifically that the principal's role in enacting school reform is a key lever for moving the work forward (Bryk, 2010; Hallinger & Heck, 1998; Supovitz et al., 2009).

The theoretical framework of the study also leverages a frame analysis approach more explicitly in these subsections. My interviews asked principals to view their school leadership from three frames - diagnostic (what is successful already), prognostic (what will they prioritize in the future), and motivational (how to they move teachers to change). A frame analysis research approach indicates that “framing processes are critical to the attainment of desired outcomes” in education (Benford & Snow, 2000, p. 632). Principals are problem-solvers by nature, so another benefit of including this frame analysis as part of the theoretical framework was that it provided a familiar structure for my principal interviews. By answering the questions, “What is working in your school?” “What is next?” and “How will you make it happen?”, principals could examine their own leadership decision-making process.

I unpack the situated cognition of the principal as it relates to his or her leadership priorities in these subsections, by first illuminating what the principals feel is successful in their schools in terms of standards-based practices, and how these successes inform their future priorities. Principal sensemaking will be unpacked for principals as
individual actors by considering each principal individually. I will summarize the findings for this subsection through the lens of how they inform the first research question. To ground the principal responses, I gave them a set of standards-based practices (see Appendix C) in the form of a card sort. The cards were similar to those used to illuminate their beliefs about their ideal school. I asked the principals to sort the practices into categories from highly successful (aspects of their school) to unsuccessful. I invited the principals to review the standards-based practices a second time, sorting them to reflect high priority elements to low priority future leadership elements.

As the principals worked with the examples of standards-based practices, I asked them to share their thinking as they considered their decisions. All the principals had elements of standards-based practices in their schools they felt were highly successful. However, many elements fell short of the standards-based priorities the principals identified for their ideal schools. For these principals, the successes existed, but more than half of the practices were placed in the moderately or not successful categories, indicating that the progress towards the adoption of standards-based practices is slow and challenging.

Principal Red. Principal Red connected school success and a strong school culture to different elements of standards-based practices, notably a non-traditional grading system, an intervention system, and a mindset shift around allowing students to redo assessments if they had not demonstrated mastery. "The thing that we are doing a... consistent job with the vast majority of teachers is this non-traditional grading system.” She identified a success with
the grading system that separates habits of work, absolutely. That's something that teachers knew philosophically was important, that it was probably not last year but the year before when we finally said, "Here is a habits of learning rubric. Everybody's going to use the same one. You can modify it slightly depending on your context. But this is the terminology they want to use to report on habits of learning and it will be separated from academic.

She continued to note that teachers have also opportunities for students to demonstrate what they know, especially with the redos and retakes. That's a big piece of our culture here. Even before we started talking about explicitly using a standards-based approach, teachers had really listened to Rick Wormeli and picked up on that retakes and redos are important. So that's part of our culture.

Another area of success is “our formal intervention system, our RTI program, is pretty robust.”

Areas that Principal Red characterized as moderately successful clustered around some of the curriculum elements, which she characterized as evolving. For example, she shared that I think teachers would agree that most, in a majority of learning situations, kids need multiple avenues to demonstrate their learning and that the standards should be broken down to learning targets. It's just getting there with their teaching partner or their teaching team. It's taking time. So they
understand the importance of that. We just aren't there yet because we just haven't had sufficient time. Time and understanding what it really needs to look like. I had some…teachers who came together a year ago and they thought they had their scoring guidelines and their learning targets all figured out. They got about two-thirds of the way through the year and said, "Whoa, there's a lot we want to change here." So they aren't there yet.

Principal Red said that progress with the curriculum elements of standards-based education depended on the content teams in her school - that all were working towards refining their curriculum, but just at different paces. “When I sit down and talk about this, and where we are as a building and what do we need to do next, the conversation always comes back around to which group are we dealing with.”

Principal Red identified elements of time and personalization that were not successful, but that might not be deemed essential by teachers. In considering the amount of time that teachers give students to learn, she admitted “they'll give a generous amount of time, but not unlimited time. Because to them....they see that as just unrealistic.” The standards-based element that prohibits students from moving on if they haven't shown mastery, prompted this response,

if a student doesn't show mastery the first time around or the second time around or the third time around....we're going to bring that student up at a team meeting....and see if they need some kind of intervention. Generally if a kid isn't reaching mastery through...classroom instruction, then something's missing. So we'll do some deeper digging rather than just continuing to give them opportunity after opportunity to flounder.
Principal Red left no standards-based elements in low leadership priority category, shifting all of them to moderate to high priority when asked how she would shift the elements from school successes to future leadership priorities.

There's a lot of things in the high priority...column that were in the medium column...Things that we would try to get to if we had time. The idea of giving kids as much time as they need to demonstrate mastery. Again, with constraints of 176 days of the year, that's hard. In an ideal world, we'd work on that. Or if other things were really solid, we could start this.

She noted that she would like to continue to give teachers opportunities to talk about how they are assessing student work as a grade level and as a department. Let's talk about how we know that this work is demonstrating meeting the standard. How do we know that? And how can we re-work this assessment so that it better aligns with what we want kids to show us?

She added that although the non-traditional grading system was established in her school, a high leadership priority for her was to improve the electronic grading and reporting tool. This sentiment was echoed by the other principals, and will be explored further in subsequent sections.

*Principal Blue.* Principal Blue identified a few elements of success in her school’s standards-based practices, sharing that “I think these are things I’m calling highly successful because I see them consistently in practice.....It feels like we're on autopilot with those things.” She noted particular success with a separation of content knowledge
from work habits, use of learning targets, the establishment of a standards-based grading system and a culture of retakes and redos.

I think that we've done really well, and I don't even get questions from anybody about it anymore.....in terms of developing a grading system that allows for mastery of standards, and using a non-traditional grading system, separating the habits of work. Separating the habits of work was the first thing we did inside of a traditional grading system. Teachers definitely know and are onboard with multiple opportunities and as much time as they need....... Learning is the constant. Time is the variable.

That's like a mantra.

Principal Blue said that her school uses an electronic grading tool with which her teachers are comfortable. The most successful elements in Principal Blue’s school are practices that she no longer had to remind staff about, indicating that they have been habituated in her school.

The standards-based elements she labeled moderately successful were those that “we are super wrestling with and in the trenches with right now” such as the establishment of a clear scope and sequence, and scoring guidelines for the standards. She clarified by stating

we have been seriously digging in on those things. It's happening, but to a certain extent .....it's two steps forward one step back process. We thought we had our scope and sequence done, and then we reorganized them...and we found all these problems.....Then we reorganized them to be able to really focus on scoring criteria and we were like, ugh. We had to go
We're going to tweak them every year, every two years, whatever. Definitely will always be a revision cycle. ... Getting to a shared understanding about scoring criteria has been way... harder than I thought. She explained how complex the creation of useful scoring criteria has been for her system, as teachers have struggled with vertical alignment both in her building and across the district. She characterized it as challenging for teacher leaders who are trying to do this alignment work across the district schools, and the feedback to her was that “we haven't provided enough support and [been] clear enough for teachers.” She summarized by saying that if a teacher leader is saying that, “we’ve got a problem.”

Principal Blue labeled the less successful standards-based practices in her school, those she has “no confidence that they're being done consistently, although certainly we've touched on all these things”, include offering a variety of assessment options, the personalization of learning tasks to the individual learner, and confidence in a strong intervention system. Principal Blue, in relating how teachers view assessments, indicated that her teachers tend to believe “projects and performance based tasks” to be formative assessment, but when it comes to summative assessments, “I still see teachers getting really stuck in test land.” Intervention systems are a particular challenge, because “in name and in vision there's a structure there, but we have not figured it out.” When commenting about building a personalization expectation that students cannot move on to the next standard until they have shown mastery, Principal Blue stated, we struggle to figure out work completion [with] students who won't do work or haven't learned it because they won't take ownership. I haven't said those students can't move on....I struggle with it in terms of what's
the best plan here...particularly the middle level...student motivation
ownership piece.......If the student is trying and working with us and
getting it, then they have a million opportunities. It's the other kid who
hasn't demonstrated they've learned it...and they move on.

Principal Blue admitted that the student and teacher culture feels positive in her school,
especially supporting student diversity and promoting “student voice.”

As Principal Blue shifted her thinking to other school initiatives, she revealed that
her school is also juggling the implementation of a new teacher evaluation plan that
includes goal-setting focused on measures of student academic growth. She said that
“monitoring student growth should really be...[a] tenant of your [standards-based]
practice, but it feels like one or the other. You know? One plate is spinning, the other one's
falling on the ground more often than not.” Balancing the ideals of standards-based
practices with the capacity and resources of the school system seems to be a challenge that
Principal Blue shared with other principals, and is a key driver in shaping her leadership
priorities as she looks to the future.

Principal Blue summarized her future priorities for standards-based practice by
saying, “essentially I took what was on medium [success] before, and I moved it to high
[priority]....continuing to work on the scoring criteria and the clear scope and sequence.
And that things are clearly broken down and shared with students and parents.... And
shoring up our intervention system.” She said that a medium level priority is to find
“more resources [for]....professional learning around assessment options and... continuing
to work on students being able to take ownership for what they are being able to say, to
know what they need to know and do.” She characterized her lower level priorities as
elements that they don’t need to focus on because they are “things that I feel like I’m pretty good, and I’m sure we’ll touch base on them.”

As she reflected on other school leadership priorities, she noted,

I really want to dig in to teaching practices. So much of what we’ve been doing with PBL [proficiency-based learning] has been about … scoring criteria and the rubrics and time, but not digging in to what’s going on in your classroom. … We get stuck on proficiency-based learning as a grading system and I think it's much more than that. So what does this look like? What does a really robust classroom teaching practices look like?

Another challenge of leadership she wanted to work on was building teacher investment in the changes she was asking, especially in the face of the administrative turn-over before she arrived, “this isn't all my responsibility or this won't really be effective unless you guys own it. I want the teacher voice in leadership...” Principal Blue was not alone in recognizing the need for teacher leadership and investment, as the sentiment was echoed by others. I will highlight their strategies for guiding teachers towards standards-based practices later in Chapter 4.

**Principal Black.** Principal Black stated his highly successful school practices, “we clearly have a grading system that has separates [work habits and content knowledge] - that's a black and white one.” He said a culture of retakes and redos is “definitely something that's in place.” And finally he admitted that “we do have finally the clear scope and sequence of learning standards for kids.”
He became more nuanced as he identified other elements that he believed are moderately successful in his school. For the idea of providing students a variety of assessment options, Principal Black noted “I would say the expectation is there. The options is what we're working on. In reality, we're not there, as far as we should be.” He also categorized his non-traditional grading system as a moderate success, sharing “We have definitely done that. I think the debate is whether it's moderately successful or highly successful. But we truly have a one to four grading system.” In terms of a successful intervention system, he noted, “I would say this varies from teacher to teacher. We have some teachers that are really good at it. Others that aren't as good at it.” Although he claimed that the school was successful in creating a clear scope and sequence of standards, he confessed that the creation of scoring guidelines for the standards was less established, noting “I think we have that for all learning standards, just, some of them have been vetted through more and are more realistic than others. Others, we have it, but if we actually used it, it wouldn't be good.” He clarified by explaining that often teachers haven’t gone back, used student work samples to calibrate the effectiveness of the scoring guidelines, and asked themselves, “do we need to change our teaching or change our learning expectations?” Struggling with the consistency and accuracy of scoring student work through scoring guidelines was a theme for all of the principals, highlighting the complexity of enlisting teacher coordination and investment.

Principal Black disclosed how a focus on project-based learning along with his standards-based learning work shaped their progress as a school and pushed them to a change in grading practices.
I think for us, with proficiency, one of the big things that we were looking at the same time was project based and hands on learning. We were developing new units and then...taking the standards and the learning there and putting them into new units, as opposed to retro fitting them into old units.... I think the big part [for] us was the instructional change around more hands on more doing more applying and just the teachers having a greater focus on - this is the essential learning target - how are we going to get there? So...the teachers having more focused teaching and assessment I think has been a big part of what we've done. We actually we started that way and ended up with a grade scale change.... We focused on the instruction side and the grading came after for us.

Principal Black expressed that this focus on interdisciplinary projects and teaming has also encouraged his teachers to see the benefit of teaming, which has also helped shift the mindset of teachers towards a “middle school mentality. We're working on that mentality of we have the whole kid not just the science student.” Teacher collaboration using standards-based practices paired with creating new units of study seems to be an important lever for change for Principal Black and other principals in the study.

Principal Black's future leadership priorities are focused on continuing to improve the grading system and intervention systems. He wants to support teachers in providing more effective feedback to students so they can monitor their own learning. Some of his lower priorities were practices he felt were well established, and his higher priorities were practices that he felt were not yet where he wanted them to be. The grading system was an ongoing priority for Principal Black because “once we were going to do it we needed to
do it right”, and that the influence of stakeholder groups, such as parents, drove him “to make sure we have it right up and running.....making sure.[it] is correct and going to produce the right grades. That is still a priority.....The teachers just being able to impactfully...communicate that.” As Principal Black has been at the helm of his school for a number of years, he seemed easily able to chart the evolution of the work of his school, conceding that he has been leading the professional learning largely on his own, so his priorities reflect a deep understanding of the instructional model he is trying to craft for his building.

Principal Green. Principal Green’s most successful standards-based elements are the creation of a non-traditional grading system, including separating content knowledge from work habits, the development of a clear scope and sequence of standards, and the expectation that standards should be broken down into learning targets for students. He insisted that these elements were ones in which he felt, “we're fairly consistent across the board.” He clarified,

This is stuff that ...has been in place since I've been here, and I think has...gotten stronger.

Most of the other elements he characterized as moderately successful, which reflected his perception that he couldn’t guarantee that they were happening consistently. When considering the practice of giving students multiple opportunities to demonstrate learning through re-takes or redos, Principal Green declared “that's part of policy..[and] our grading practices. In terms of how consistently do teachers apply that, I worry about that a little bit.” His other moderate successes struck a similar tone. Principal Green felt that there were good opportunities for intervention systems with students in his school,
particularly for math and reading, but for the access to re-teaching opportunities, he noted, “I don't think it's as robust as we want it to be.”

Although he noted success in the existence of a non-traditional grading system in his school, like the other principals, Principal Green revealed the challenges in making the system meaningful to students and parents. “You want to have this system that's easily explainable to parents”, but when there are questions with the grading practices, “you take them through [this] whole thing and they're just like, ‘Why can't we do zero to 100 again’?” As he moved to considering elements that were not successful, he noted only one. Like the other principals who considered the notion of personalization of learning, he also admitted that it wasn’t successful because “it's never been an expectation here.... that they can't move on if they don't show mastery.”

As Principal Green was invited to disclose other successful elements in his school, he grew animated describing the recent efforts to introduce more project-based learning practices to his school. He elaborated on a culminating event that drew local publicity to view student projects, “there was a vibe there. Lots of parents coming in. So I feel like that was successful for the school.” Because of this successful project Principal Green considered future priorities for his leadership, thinking he will “sit down with teachers and try to figure out where we go from here” with project-based learning, because he felt it was a practice that had some positive momentum for teachers, although he noted that to do this, he would have to consider “what can be taken off the plate [for teachers] that won't impact kids in a significant way?”

Principal Green’s future leadership priorities involved moving some of the elements that he felt were moderately successful into the high leadership priority category.
His new high priority categories include the improvement of the student intervention system, the revision of scoring guidelines, and the development of an assessment system that allows students more options to demonstrate their learning. He acknowledged that these practices are in place in some classrooms but have to be on the front burner every year. One of Principal Green’s reluctant leadership priorities is the grading system, declaring that although it is established, there were still many questions, and “we do revisit it quite a bit”, which prevents him from moving it to a lower leadership priority. Like other principals, his low priorities are providing students as much time as they need to master the standard, or personalizing all learning tasks to the individual learner as conceding that he hasn’t set them as an expectation for teachers.

**Summary of principal successes and priorities.** The findings in this subsection support answering the first research question by providing evidence of the sensemaking practices that have emerged from principals reflecting on their leadership successes and priorities. These findings also support a key finding in the study – that principals hew to the unique context of their school when determining what elements of standards-based practice to adopt. This can be seen in their reflections about grading practices, and the rejection of the element of personalization in their leadership priorities.

There are a number of commonalities across the four principals. All have building practices that separate student work habits from content knowledge, and all consider those to be successful practices in their schools. All have an online managed, non-traditional grading system in place in their schools that they see as largely successful, but all view it as a challenging component in their leadership. Making a non-traditional grading system a leadership priority varies somewhat between principals, depending on how they view the
grading system. Are they considering whether teachers are successful managing the grading platform, or are they considering whether the platform and system communicates what they want it to communicate to teachers and parents? The complexity of managing both the platform and the nuances of how teachers, students, and parents understand the system is a consistent theme in principal sensemaking as it is illuminated within building leadership.

The curriculum oriented elements of standards-based practices reflected the challenges with language and interpretation, and how these elements might be translated into classroom practices. The creation of scoring guidelines as a mark of success revealed that some principals considered simply whether they were done at all, and qualified that a school success, while others considered whether or not they were used and effective, and categorized them with that mental framework in mind. All of the principals, in some way, noted the disconnect between simply having them completed, as a compliance task, and having teachers be invested in them, and see them as helpful in their classroom practice. This seems to be a common theme among all the principals - that these sort of scoring documents have to be revisited and revised regularly in light of student work.

All the principals claimed that the element of personalization, in which all learning tasks are personalized to the needs of the individual learner, as not successful in their school, and not a leadership priority. Principal Red considered it slightly higher because she sees it as ideal practice, but not realistic in a public school. This stance by all principals appears to be due to the disconnect between the practicality of the approach, and for some, their experiences seeing it delivered as worksheet packets in the model schools they visited. In the next subsection, I explore the strategies principals employ to
guide teachers to standards-based practices, in an effort to deepen the sensemaking picture to answer to the first research question. I will focus on the commonalities in an effort to help shed light on how principals navigate in the confines of public schools to reinforce or reject approaches that that they deem unlikely to be successful in their schools.

**Situated cognition-guiding teachers to standards-based practices.** In this subsection, I examine how the principals guide and motivate teachers towards adopting new standards-based practices. Principal sensemaking is unpacked for principals in this subsection comparatively as sensemaking themes emerge. This subsection provides evidence to support a key finding related to the first research question - that principals made strong efforts to mediate the collective sensemaking of the practioners in their buildings, as well as support individual teacher sensemaking of new practices they wanted them to adopt. This subsection also supports another key finding related to how leadership choices are deeply affected by the unique context of the school.

I organize this section by identifying themes related to strategies principals use to motivate teachers to adopt new practices and build investment in reform efforts. By representing the principals’ voices together, instead of separate, their comparative sensemaking may provide a more powerful view of the strongest levers to promote change in a school building. As described earlier in this study, not only does effective principal leadership have a significant influence on school reform success (Bryk, 2010; Day et al., 2016; Hallinger & Heck, 1998; Leithwood et al., 2008; Marzano et al., 2005; Supovitz et al., 2009; Waters et al., 2003), but school principals often lead through a variety of leadership strategies. The most effective principals focus on setting direction
and vision, developing teachers, and developing school organizational function (Leithwood & Riehl, 2003). Not surprisingly, the principals in this study were keenly focused on the work of the teachers in their buildings. They made choices that increased the capacity of the teachers to adopt new classroom instructional practices, with the expectation that students would benefit. For all the principals, their strategic work largely focused in two broad areas, being sensitive to the collective capacity of the teachers for the change they are promoting, and being sensitive to the individual capacity of teachers to change their practice.

**Collective teacher sensemaking.** All of the principals noted a deep awareness of the context of their particular school building with regard to the standards-based instructional change. For three of the principals, who were within five years of their tenure as leaders, the history of the work before them was important to acknowledge. Principal Green said, “being able to come in and stabilize....and be clear about this is what we're going to do.....I think that's where a lot of the time and energy and effort went into was figuring out the issues.” Principal Red, who entered a school that was already working towards a standards-based system, asserted “It's not really about my background knowledge about this stuff, because my background knowledge about this stuff is minimal compared to a lot of the teachers here. But I do know how to say, ‘It's going to be okay and we're just going to try this’.” Principal Blue confessed that “I spent a lot of my first year sort of ...righting the ship and.....taking back who was responsible for what.” Principal Black, who had been in his tenure the longest of the principals, was able to recognize that new practices take time to develop, and in looking back at his process, that his school’s current status was not what he expected when he began. He put it
clearly when he stated, “when I started here, I didn’t plan to do this.” All the principals also recognized that building the capacity for change in the building required sharing their leadership with the teachers.

All the principals provided many examples of how they engaged the collective sensemaking of the teachers in the building. Principal Blue said that “we kind of learned and looked at things together and made decisions.” Principal Red provided a summary of her perspective when she stated,

Because I'm not the keeper of the answer and I'm not the one who's out employing this every day. The teachers are. So they need to own it. It needs to be theirs. But it's also part of my job to see the big picture and communicate the big picture, so I'm going to communicate the big picture and then say this is the direction we're headed.

Principal Black, in considering how he worked with teachers to understand the reform effort he was promoting, insisted “I think the biggest thing is starting with the teachers. You have to work with the teachers, and the teachers have to buy in and want to move this way.” In explaining his leadership style, Principal Green asserted, “for me, it's more of....build consensus around ideas, but it doesn't have to be....everybody's got to be in this, or we're not doing [it].” Principals perceived that professional learning, as a tool to support collective sensemaking and building capacity in the school, was the most effective for specific circumstances.

Professional learning for the principals took many forms, from sending teams of teachers to visit other schools or engage in workshops, to building and leveraging the use of collaborative teacher teams, or building capacity by leveraging the importance of
Middle schools are typically organized around teaming, both for students and for teachers, so all principals acknowledged using these teacher teams to engage in learning together. For many of them, the teams were a fundamental structure to move the work forward, and the principals were very strategic about their use of professional learning with their teachers. The principals also used conferences and school visits to build understanding and capacity, but their use was strategic, based on what they knew about individual teachers or teams. Through the course of the interviews, all principals provided examples to highlight their approaches.

Principal Red disclosed that she would consider the needs of a particular grade level or content team, and send them to a conference if they seemed ready, saying “a lot of them really turned a corner with some of it.” She gave an example of a teacher who changed her perspective after attending a conference, stating “she just wasn’t ready for her eyes to be opened a year or two ago, and now she really is.” Principal Red admitted that she provides teachers “a lot of autonomy by department”, explaining how she shapes the professional learning of the team based on their level of understanding and need, with some needing more outside direction, and others able to build capacity from within. Principal Red also described a strategy of having “department meetings that are explicitly structured around looking at student work”, exhorting teachers with the challenge of “how can we come to work every day and know that we are doing the very best thing for kids?” All of the other principals echoed this strategy of making the professional learning shaped around the needs of students.

All principals explained that they frame the work in terms of the benefit to students, supporting the idea that they are largely driven by their own belief in the value
of the standards-based practices. One of Principal Black’s strategies is to let teachers know that “this is what kids think about your class”, to help them see their instruction from the student perspective. He combines this feedback by supporting their efforts to try new approaches. He talks to teachers about the “idea that we can’t always do what we’ve always done.”

Principal Red reminds teachers that “we are doing this because it’s just good instruction”, and Principal Black states, “These kids deserve best practice.” Principal Blue echoed, “we took what we felt was best practice….and put it in our classrooms.” Principal Green encourages teachers to think about classroom culture and climate, explaining that he wants students to feel “excited about being there”, particularly with regard to his efforts as supporting project-based learning.

The principals sent teacher teams out to visit other schools. Principal Black wanted teachers to see other models as they were shaping their vision, with the expectation that they should see “what the different worlds look like”, but that “we’re going to come up with a plan together” after viewing other models. Principal Blue revealed that her teacher leadership team visited a school with a lot of resources to support their work, but she encouraged them to “pick these things apart.” She said that they “kind of learned and looked at things together and made decisions.”

The common theme for the principals in the strategies of building professional capacity and supporting the collective sensemaking of their teachers was the importance of championing the big picture, and building individual relationships with teachers. All principals were sensitive to the individual capacity of teachers for change, and they used a variety of strategies to support these relationships.
**Individual teacher sensemaking.** A key component for all the principals was tending to the individual sensemaking of teachers as they responded to new expectations, although the process could be frustrating when it moved slowly and took time. Principal Green said, that even when he made his expectations clear to the teacher teams, “if it hasn’t been personally said to them, it just doesn’t... happen.” But he also conceded that he has a style “where we would make decisions together... then actually carry those out”, leading him to hope that as these issues resolve, he will have more time to focus on “the day to day teaching” with individual teachers. Principal Red is very explicit when describing her approach to supporting new learning with individual teachers.

'It's...continual, for me, keeping tabs on what is this person's attitude towards it and what do they need in order to continue to build their attitude positively.” She is keenly aware that fear of change can drive teacher resistance,

> My relationship with teachers comes in to play when there's even the littlest thing for them to be afraid of... So one of my strengths as a leader is helping people calm down about things that they're afraid about and just sort of exuding calm and exuding a little bit of excitement about something that's new and different. And reassuring. I do a lot of reassuring that you don't know how this is going to work or not work until you try it, and so you have to try.....Please try it, and then X number of days after you've tried it, we're going to have a conversation... and talk about how that worked. And what do you still need to keep doing? What are your fears? What are you not afraid of anymore? What are you still
afraid of? The more we can baby step into things that are fearful, the easier they become.

Being aware of the emotions that can affect individual sensemaking builds relationships, but is also strategic, because it can support a culture of clear communication and innovation.

This idea of creating a culture with individual teachers that encourages risk taking is echoed by Principal Black, but he expressed how he supports the new approaches by teaching alongside of his teachers. “It makes it harder to give push back, cause they know that I know what I'm asking of them, cause I'm doing it with them.” His focus on student learning, and working closely with teachers allowed him to be honest with his teachers. “I don't really have to sugar coat the stuff with teachers cause they know that I'll work with them to help change it as opposed to saying you're in trouble for this.” Principal Blue uses a strategy of making new learning seem less intimidating by taking it in pieces. I try to break it down into...here's what I want you to try this month or here's what we're talking about today and I'm gonna stop in your team meeting in a week. [You can] tell me whether you're able to try any of these things.

Principal Black acknowledged that supporting teacher efforts to try new approaches means he must “to support it with time and money”, valuing the teacher time and effort that it can take to redesign units of study, and that “if you're gonna be prepping and developing new things and spending a week in the summer, we're gonna figure out how to pay you.” Although most of the principals would probably identify these approaches
as simply part of their leadership style, they are also strategic in supporting teacher sensemaking of the changes being asked of them.

**Summary of guiding teachers to standards-based practices.** This subsection provides evidence to support a key finding related to the first research question – that principals made strong efforts to mediate the collective sensemaking of the practitioners in their buildings, as well as support individual teacher sensemaking of new practices they wanted them to adopt. All the principals in the study provided evidence of their efforts to both mediate collective teacher sensemaking, through structuring or encouraging access to team-based professional learning, and support individual sensemaking, through relationship building with teachers. I found substantive evidence that principals supported individual teacher sensemaking through examples of relationship building, working alongside teachers to model new approaches, and encouraging teachers to take risks to try new approaches. Principals in this study demonstrated their sensitivity to building the professional culture of their schools and supporting individual teachers, seeing those as crucial priorities for school improvement.

**Impact of Accountability on Principal Leadership**

The last area of principal sensemaking to be explored is the “role of policy stimuli in implementing agents' sense-making” (Spillane, Reiser, et al., 2002, p. 389). This section focuses on the principal’s perspective of stakeholders beyond the school walls in an effort to understand what influences their leadership choices, and provides important evidence to answer the second research question, particularly related to the role of accountability in influencing principal leadership actions. Stakeholders, such as parents, district curriculum personnel, and the superintendent are important when implementing a
complicated policy initiative such as standards-based education, where there is no linear path from policy creation to classroom instruction. The stakeholders may influence the principals through supporting their leadership efforts, undermining them, or ignoring them, all of which shape the choices principals make as they move forward.

In this section, I intentionally preserved the confidentiality of the principals by not attributing comments to a specific individual. Maine has a relatively small population, and even though the study area is in one of the more densely populated sections of the state, most school districts only have one middle school. Comments about the tenure or leadership qualities of central office personnel may inadvertently identify the district, and therefore the principal, to local readers when I report the experience of the principals with superintendents or other central office personnel. I will structure this section by interweaving principal perspectives while exploring the influences of a variety of stakeholders. I include superintendents, district curriculum leaders, parents, and state policies themselves, and provide quotes without direct attribution to a principal.

**Superintendent influence on principal sensemaking.** Among the four principals, I found little consistent experience with superintendent leadership. Two principals were hired by and still working with their current superintendents. One principal had a multitude of different superintendents during his tenure, and another had two different superintendents. The experience of the principals points to two commonalities - the influence of the superintendent is less impactful than the principal’s belief in what constitutes strong instruction for students, and a positive relationship with the superintendent, including an alignment in belief, amplifies the principal conviction in her/his leadership priorities.
One principal, who pointed to a strong alignment with her superintendent, said that during a public meeting about standards-based education, “the superintendent called that meeting and actually opened it up and led the meeting and talked about his perceptions, and his beliefs about standard-based learning, and I mean, they're spot on with what I believe too.” She acknowledged that the superintendent was “good at helping parents understand” and “sat in on conversations [about classroom instruction] and has been an integral part of where we’re headed as a district, just by being part of those conversations.” This principal admitted that she was “definitely taking the lead from the superintendent on this”, and indicated that her leadership would adjust without the superintendent support. “If the superintendent wasn't supportive, and the teaching staff wasn't supportive, and I was the principal and this was my philosophy, I would do whatever the board directed me to do, but I know I wouldn't be happy, and I might be looking for a different job.” This strong statement about superintendent support reinforces this principal's already strong philosophical beliefs about teaching and learning, indicating that alignment with building and district messages are tighter with this type of supportive relationship.

The other principal who was hired by and currently working for the same superintendent indicated that the superintendent had a strong positive influence on his leadership, and their beliefs aligned. However, the superintendent and the principal were even more strongly aligned around the use of project-based learning and the importance of experiential learning for middle school students. The principal noted that for his superintendent,
I don't think his strength is necessarily in understanding all these things.....I think like a lot of people, he gets mixed up in all the terminology . .I think for him, the hands on experiential, community based, problem solving approach, that's typically what I feel comes out more with him than anything else. ...I feel good because I feel like what we're doing as a school is really in line with his values about what education should look like.

These two principals’ perspectives indicate that the superintendent has a stronger influence if he or she hired them, which likely meant that their leadership philosophies and beliefs aligned. Both principals insisted that their beliefs were a strong motivator in how they led in their schools. On the other hand, if the superintendent had no influence on their leadership decisions, both principals would continue those decisions, implying that their superintendent’s support simply made their leadership experience more positive.

Of the other two principals who had more than one superintendent, the superintendent’s influence is a different picture. One principal could easily point to examples of how superintendents had supported his work along the way, including providing funding and encouragement, but when asked if he would change anything if there was no superintendent influence, he noted, “I’m not sure we really would”, sharing that he is mostly influenced by “wanting to improve what our school does.” This principal seemed to be fairly autonomous, and had a deep sense of ownership over the instructional model of his school. He saw the superintendent as a resource when needed, but not as a strong influence. Given this principal’s track record of steady improvement
for his school, he was confident that any superintendent would support his leadership decisions.

For the last principal, having more than one superintendent raised issues about how decisions are made district-wide, as the system grappled with implementation. “There has been a lot of talk and angst at times about...what needs to be consistent in K12 and what doesn't and who decides”, indicating that the superintendents may have valued a more systemic approach. This principal did note that she has built her beliefs about standards-based instruction within her current role than in her prior leadership experiences. When considering whether she would change her leadership if the superintendents had no influence,

It's funny you know, because if I had never come to this district...and thought about ...what kind of school or what sort of things I was looking for in a school, proficiency-based learning was not on my radar at the time. Would it have been if I didn't come to [this district]? I don't know.

This principal’s perspective indicates that the superintendents did influence her sensemaking, primarily to some of the policy concepts, and her district was grappling with it systematically.

Overall, these principal perspectives indicate that superintendent influence largely operates as an accelerant to already held or developing principal beliefs when they are in alignment. For longer tenure principals who experience superintendent turnover, superintendent influence diminishes as individually held beliefs grow. All principals indicated that they would not meaningfully change their leadership priorities if the superintendent had no influence. This is evidence that the principals’ intrinsic motivation
and beliefs play a stronger role in their leadership decisions over the role of outside accountability in the form of a superintendent. Next, I examine the influence of the district curriculum leader, who typically does not have a supervisory role over the principal but can influence a principal’s leadership decisions ranging from counterproductive, to benign or supportive.

Curriculum director influence on principal sensemaking. All the principals in the study worked in districts that had some form of a district curriculum leader whose role was to coordinate and support the instructional work in the schools. In all cases, the curriculum leader did not hold a supervisory role, and their influence was surprisingly variable across the principals. Two of the four principals in the study had the same curriculum leader during their tenure, and two principals worked with more than one curriculum leader. The curriculum leader’s influence appears to fall more in an advisory capacity, with all principals welcoming curriculum leader support when it aligned with their leadership needs, and ignoring or rejecting curriculum leader efforts that did not advance their leadership priorities.

One principal said that her vision aligned with her first curriculum leader, “but she wasn’t able to communicate that very clearly. Her interpersonal skills were not effective”, leading to confusion on the part of teachers, which the principal responded to by not using her as a resource. A more recent curriculum leader was an effective and positive influence, a “perfect person to be leading this charge in the district”, and a much stronger influence on the principal’s leadership priorities. Another principal, who had a number of curriculum leaders during his tenure, stated, “we’ve never had a curriculum
person that has had anything to do with this”, which is consistent with his more autonomous experience leading standards-based reform in his school.

The principals who had the same curriculum leader during their tenure did not point to those individuals as highly influential in building their beliefs, but they did say that they were helpful. One described the curriculum leader as helping “with the real nitty of gritty of defining the standards” and helping find resources. The other indicated that the curriculum leader identified the “guard rails” for standards and assessments, ensuring some consistency in the district. In both those cases, the curriculum leader seemed to have a helpful but benign influence, focusing specifically on supporting curriculum documentation, and not the larger challenges that the principals faced in guiding their teachers to new instructional practices. Like the superintendents, the curriculum leaders had a weaker influence on the principals’ leadership decisions, particularly if principals worked closely with teachers and students on a daily basis. The principals utilized curriculum leaders if they were helpful, but moved them to the sidelines if their work did not align with the principal’s priorities. Principals described other outside influences on their leadership choices, particularly parents and school boards, which I examine next.

Other influences on principal sensemaking. Principals stated that the perspective of their school board influenced their leadership, but in different ways. Principals either had to convince their school board of the effectiveness of their school models, or the school board was very supportive, which they appreciated. The role of parent stakeholders was a strong but somewhat unexpected influence on principal sensemaking. Because of parental influence, principals had to consider changes in school
practices, particularly around grading and reporting. One principal noted a strong positive influence of the school board, saying “they get this on a conceptual level”, largely due to superintendent influence. She found “the board to be supportive”, which reinforced her own leadership priorities. But for others, the school board could be activists in a different way, getting “riled up” about grading practices in particular, and for one principal, acting “like they have more influence than they really should as a board.”

Another principal needed to frequently remind the school board of the positive school metrics and enlist their support. With the recent change in Maine law which eliminated the requirement that Maine high schools issue a proficiency-based diploma, many school boards reconsidered their district’s high school practices. This resulted in questions for some of the principals in the study. One principal declared that he needed to be explicit with the school board, saying,

We were just very clear that this has nothing to do with the law. This is best practice. And we even told them that if you were to vote to get rid of this, we can't get rid of it in the fall. We can't just turn a switch and go back.

Although school board members could be influential and the principals needed to consider their concerns, parents had a stronger influence on the principals’ leadership decisions, particularly around grading practices.

Educating and enlisting the support of parents shaped the leadership of all the principals in the study, especially as they embarked on non-traditional grading systems. One principal recounted a public meeting she held to help parents understand the changes
in the grading system. Of the parents in attendance, “equal numbers of people who were there that night who were very, very supportive, and others who were just confused and didn't want the change.” All the principals indicated that parents were strongly influential stakeholders for them. If parents pushed strongly for changes, principals were willing to change their leadership practice, particularly around grading practices. All endorsed the grading practices they had in place, but they all seemed to recognize how tenuous and fraught these grading practices were. As evidenced by their comments about grading reported earlier in the study, they all acknowledged that they would consider a different grading system if pressured. They believed they could adhere to the core tenets of their standards-based beliefs outside of a purely non-traditional grading system.

Although parents and school boards influenced principal sensemaking, the findings still support the stronger influence of their own beliefs as drivers of their leadership priorities.

State policy influences on principal sensemaking. In Maine, the region of this study, the passage in May 2012 of LD 1422, An Act to Prepare Maine People for the Future Economy, which mandated high school diplomas based on demonstrated proficiency of the Maine Learning Results standards, was a catalyst for schools to adopt standards-based practices. The law was controversial from the outset, with many state educators supporting the ideals, but challenging the realities of implementation. Parents became influential stakeholders, as they grew increasingly concerned about changes in grading practices. Bowing to unrelenting pressure, Maine legislators passed, in July 2018, LD 1666, An Act to Ensure the Successful Implementation of Proficiency-based Diplomas, which, despite the misleading name, is actually a repeal of the original law. LD 1666 allows school districts to continue with proficiency-based systems or revert to a
traditional, credit-based system to award diplomas. This has left many Maine districts in a quandary about how to proceed with their standards-based systems, but provided an interesting backdrop for the principals in the study. Because the change in the law happened as data collection was underway, questions related to the change were not included in the interview protocol. However, for some principals participating in later interviews, reflections on the change in the law occurred spontaneously as they considered how this change might affect their leadership priorities. Although I cannot consider these reflections systematically in my research design, I included the anecdotal reflections, as they may provide fodder for future research efforts.

The principals generally credited original state law for sparking the movement towards adopting standards-based practices but felt like the actual influence on their leadership priorities over time was fairly minimal. They were cynical about the role of state influence, particularly because Maine has a long history of districts controlling curriculum and instructional choices. Principal Red said that “if the state actually stuck with something for longer than two years, that would help a lot, I think.” Principal Green admitted that “knowing the state and what can happen...is anybody surprised?... Things have always gone that way since it’s the state..” Principal Blue commented, “I think the system is, in a lot of respects, broken, and this is... one example of it. I don’t see legislation...being implemented with integrity across the state.” Principal Black summed it up by sharing,

This is how I judged any initiative that came from the state or the central office. Are they giving you time, are they giving you money? If they're
not giving you both, it's gonna go away. And proficiency, they didn't give you really much of either. And it went away.

Initiative fatigue allowed the principals some freedom because the state mandate became a weak influence on their sensemaking around leadership priorities, and consequently other influences, such as their own belief systems, became stronger.

The principals who were able to reflect on the passage of LD 1666, which allows school districts to continue with proficiency-based systems or revert to a traditional, credit-based system to award diplomas, had varying perspectives about how it would influence their leadership priorities. Principal Green noted that with respects to grading practices at the district high school, they “could change with the change in the law. I haven't heard any uproar from parents about it, but I think our piece is whatever the high school settles on, we have to make sure we're preparing our kids for that.” As highlighted earlier by Principal Black, he also noted that as the possibility of the change in the law was discussed, last “spring when we were talking to the school board, we hadn't thought that it may come or go, you know, we weren't really sure. And we were just very clear that this has nothing to do with the law. This is best practice.” Principal Red took an even stronger stance, stating that the change in the law, does not change my thinking. If I worked at a high school, I don't know what I would be thinking. Because we already have an agreement at the middle school level.....that what we do here is about learning. So whatever we need to do to develop the integrity of the learning, is what we're going to do. So that doesn't mean ranking and sorting kids, and scoring them on the nth degree. It means really giving them good feedback
about what they're learning, making sure that they understand what they ought to be learning. So yeah, what the state is doing or not doing is really kind of esoteric to me.

Because the data collection for the study took place so closely to the passage of LD1666 in Maine, future research could explore how principal leadership priorities changed as the shift in state policy became more established.

**Summary of influence of accountability on principal leadership.** The findings from this portion of the principal interviews provided important evidence that informed the second research question, and are the basis of a key finding related to stakeholder influence. As the principals worked towards implementing standards-based education, the role of other stakeholders, including parents, district curriculum personnel, and the superintendent appeared to be an important influence, but not as strong an influence as their individual beliefs and school leadership experiences. The accountability measures that these stakeholders brought to the table influenced the choices principals made moving forward by supporting their leadership efforts, undermining them, or ignoring them. Because the superintendent leadership experiences varied among the principals, the findings about the superintendent influence are difficult to generalize. The experience of the principals points to two commonalities -- the superintendent’s influence is less impactful than the principal’s belief in what constitutes strong instruction for students, and a positive relationship with the superintendent, including an alignment in belief, amplifies the principal’s conviction in her/his leadership priorities. Overall, the principal perspectives indicate that the influence of superintendents largely operates as an accelerant to already held or developing principal beliefs when they are aligned. For
longer tenure principals who experience superintendent turnover, the superintendent’s influence diminishes as individually held beliefs grow. All principals indicated that they would not meaningfully change their leadership priorities if the superintendent had no influence. This is evidence of the stronger role that intrinsic motivation and beliefs play over the role of outside accountability in the form of a superintendent, supporting a key finding for the second research question.

The influence of curriculum leaders was surprisingly variable across the principals. Without a supervisory role, the curriculum leader’s influence falls in an advisory capacity, with all principals welcoming curriculum leader support that aligned with their leadership needs, and ignoring or rejecting curriculum leader efforts that did not advance their leadership priorities. Like the superintendents, the curriculum leaders’ influence was weaker on a principal’s leadership priorities than simply the experience of working closely with teachers and students on a daily basis. For curriculum leaders in particular, the principals utilized them if they were helpful, but moved them to the sidelines if their work did not align with the principal’s priorities.

Principals stated that the perspective of their school board influenced their leadership, but in different ways. Principals either had to convince their school board of the effectiveness of their school models, or the school board was very supportive, which they appreciated. A strong but somewhat unexpected influence on principal sensemaking - the role of parent stakeholders - emerged as a factor that did drive principals to consider changes in school practices, particularly around grading and reporting. All the principals indicated that parents were strongly influential stakeholders for them, and they would be willing to make changes to their leadership practice if parents pushed strongly for them,
particularly around grading practices. Although parents and school boards influenced principal sensemaking, the findings still support the stronger influence of their own beliefs as drivers of their leadership priorities, informing both the first and second research questions.

When considering the influence of the state policy in Maine, principals in the study generally credited the original state law for sparking the movement towards adopting standards-based practices, but felt like the actual influence on their leadership priorities over time was fairly minimal. Most expressed cynicism about the role of state influence, particularly because Maine has a long history of curriculum and instructional choices being controlled at the district level, and state initiatives often fade relatively quickly. This initiative fatigue seemed to allow the principals some freedom, however, because it allowed the state mandate to be a weak influence on their sensemaking around leadership priorities, and consequently other influences, particularly their own belief systems, became stronger.

**Overall Summary of Findings by Research Question**

I organized the findings in Chapter 4 in order to highlight the principal sensemaking around standards-based practices, and to broadly answer my research questions. I have organized the final summary explicitly around the research questions, which allows the cognition of the principals to come into sharper focus. This lays the groundwork for Chapter 5, where I discuss the key findings, my recommendations for policy implementation, and for future research. The research questions were:

- How do middle school principals make sense of their role in leading standards-based educational change?
• How do the forces of
  o their belief in the value of the standards-based education and
  o their accountability to the district and state to create change, affect their
    leadership practice in the school?

Using the theoretical framework of the study, I gathered evidence through a series of three interviews that each explored a different facet of sensemaking - from the individual beliefs (individual cognition) of the principal to their perspectives and actions in the context of their school leadership (situated cognition), to the influence of district and state accountability (representative cognition).

To answer the first research question, I drew on evidence from the interviews for each individual principal in each of the three facets. First, I explored the principal’s understanding of elements of standards-based practices in order to ascertain common understanding which makes comparisons across districts and principals easier. Next, I examined the principals’ individual cognition. I focused on their beliefs around the value of standards-based practices in the context of an ideal school and the influences that shaped those beliefs. Finally I focused on the principals’ situated cognition in the context of their current school building leadership. I considered how principals lead standards-based reform efforts, including how they prioritize their leadership moves and guide teachers to adopt standards-based practices.

In order to answer the second research question, I looked at the evidence the principals provided in the three facets of sensemaking. I wanted to document their perspective about what influences drove their leadership choices. My evidence came primarily from a closer analysis of how the principals characterized their ideal schools, as
well as their reflections on how their leadership was influenced by the messages they received from their district or the state department of education.

**Summary for research question 1.** The first research question asks, How do middle school principals make sense of their role in leading standards-based educational change? I used evidence from the interviews with each principal for two of the three facets of the theoretical framework, individual cognition and situated cognition. The third facet of the theoretical framework, the role of representation, is summarized as evidence for the second research question, although it also informs the first question by illuminating principal sensemaking. I organized the summary of evidence by, 1) the principals’ understanding of elements of standards-based practices; 2) the principals’ perspective of their ideal school and the influence of direct experience on their beliefs (individual cognition); and 3) the principals’ perspective of their successes and priorities and how they guide teachers to standards-based practices (situated cognition) in the context of their current school building. This summary sets the stage for the discussion about key findings in Chapter 5. Key findings related to the first research question include:

- The challenge of language related to standards-based practices,
- The strong efforts that principals make to mediate teacher sensemaking of standards-based practices, and
- The importance of the unique context of the school for principals as they make leadership decisions.

**Understanding standards-based elements.** The evidence from this section highlights a key finding related to principal sensemaking in the first research question,
which is the challenge that the use of language related to standards-based practices posed for principals. The commonalities for principals around essential elements of standards-based systems included the use of common standards, providing intervention systems for students who do not demonstrate mastery of standards, and separating work habits from content knowledge in a grading system. But even within those elements, there were differing interpretations of all those elements, highlighting the challenges in supporting sensemaking in complicated reform efforts. Grading systems posed a particular challenge for the principals. And there was also some commonality around the challenges with some of the ideals that have been promoted with standards-based systems, particularly allowing unlimited time and personalizing learning to the learner. Although the principals could recognize the ideal, they struggled to fit it into the school systems that they were working in on a daily basis, and thus rejected these elements as non-essential in a standards-based system.

**Summary of their ideal school and the influence of direct experience.** I organized these findings around the principal’s perspectives on what standards-based practices would be included in their ideal school, as well illuminating some of the influences that shaped their individual beliefs apart from their current principalship. The findings from principals revealed strong alignment in their perspectives about essential elements in standards-based practices to practices that they would include in their “ideal” school. This indicates that either they are unable to separate their ideas about an ideal school from their experience in their current principal leadership role, or that the beliefs that they carry into their current principal leadership role strongly shape their leadership priorities. Variability among the principals existed in a number of areas, including the
importance of curriculum elements, and the focus on the individual learner. Some
principals offered elements I did not include in the choices I provided to principals. Two
offered effective communication as an essential element in their ideal schools, seeing
involving stakeholders as an a critical component that they often do not have enough time
to enact as well as they would like in their current roles. Two identified experiential
learning as a priority for them in an ideal school. Overall, the principals demonstrated a
strong alignment to standards-based practices in their ideal schools.

In considering the influences that shaped individual beliefs among the four
principals, a common thread was the role of direct experience, either as a learner or a
leader. Direct experiences included one’s own experience with seeing the impact of
project-based learning for students and teachers, by having an experience as an adult
learner that was counter to one’s experience as a young learner, or by working alongside
teachers to try new approaches, reflect on them, and then adopt them if they seem more
effective. For three of the principals in the study, visiting other schools that were
undertaking a shift to standards-based practices was reported as an important influence,
both positive and negative. They either saw practices that inspired them, or they saw
classroom practices, especially around personalization through providing individual work
packets to students, that they deemed ineffective. Two of the principals specifically cited
author and speaker Rick Wormeli as a strong influence, but other than this educator, there
was little reference to the influence of educational theory focused on standards-based
practices. The locus of influence on personal beliefs points to the role of experiential
learning for adults in shaping their beliefs about teaching and learning. As the
sensemaking picture for these principals became more clear, the value of engaging in actual experiences, as opposed to being provided theory, became more apparent.

Summary of their successes and priorities and guiding teachers to standards-based practices. There are a number of commonalities that all four principals share when comparing the successes and priorities. All have building practices that separate student work habits from content knowledge, and consider those to be successful practices in their schools. All have an online managed, non-traditional grading system in place in their schools that they see as largely successful, but all view it as a challenging component in their leadership.

The complexity of managing both the online grading platform and the nuances of how teachers, students, and parents understand the system is a consistent theme in principal sensemaking within building leadership. The challenges with language and interpretation are reflected in the curriculum oriented elements of standards-based practices and how these elements are translated into classroom practices. All of the principals, in some way, expressed the disconnect between simply having the curriculum oriented elements of standards-based practices completed as a compliance task, and having teachers invest in them, and see them as helpful in their classroom practice. This seems to be a common theme among all the principals - that these sort of curriculum elements have to be revisited and revised regularly in light of student work.

All the principals said that the element of personalization, that all learning tasks should always be personalized to the needs of the individual learner, was not successful in their school, and not a leadership priority. This stance by all principals appears to be due to the disconnect between the practicality of the approach, and for some, their
experience of seeing it delivered as worksheet packets in the model schools they visited. This supports the key finding regarding the importance of the unique context of the school for principals as they make leadership decisions, as they determine what is “do-able” in their own schools.

All of the principals in the study provided evidence of their efforts to both mediate collective teacher sensemaking, another key finding in the study. They guide groups of teachers towards adopting standards-based practices through structuring or encouraging access to team-based professional learning. Principals provided evidence that they supported individual teacher sensemaking through examples of relationship building, working alongside teachers to model new approaches, and encouraging teachers to take risks to try new approaches. Principals in this study demonstrated their sensitivity to both building the professional culture of their schools and supporting individual teachers.

**Summary for research question 2.** The second research question asks how the forces of the principal’s belief in the value of the standards-based education and their accountability to the district and state to create change, affected their leadership practice in the school. I used evidence from the interviews with each principal for each of the three facets of the theoretical framework, individual cognition, situated cognition, and the role of representation. The first section, focused on the influence of their beliefs, leans heavily on the evidence from how the principals characterized their ideal schools. The next section examines their reflections on how their leadership has been influenced by the accountability messages they received from their district or the state department of education. This summary prepares for the discussion about key findings in Chapter 5. Key findings related to the second research question characterize the influence of belief
and accountability on leadership decisions, teasing out which levers are stronger for the principals in the study.

**Summary of influence of beliefs about standards-based education.** In order to answer the second research question I did a closer analysis of how the principals characterized their ideal schools, as well as how their leadership has been influenced by district and state leadership. The findings from principals revealed strong alignment in their perspectives about essential elements in standards-based practices to practices that they would include in their “ideal” school. This indicates that the individual beliefs that they carry into their current principal leadership role strongly shape their leadership priorities. All the principals demonstrated a strong alignment to standards-based practices in their ideal schools. The principals’ perspectives pointed to a locus of influence around the role of experiential learning in shaping their beliefs about teaching and learning.

As the sensemaking picture for these principals became more clear I found that all of them valued engaging in actual experiences, as opposed to being provided theory. I found that the cycle of experiential professional learning, followed by enacting novel standards-based practices in collaboration with teachers, deepens and enhances their personal beliefs about the value of the approach to improve student learning. As Principal Blue stated, “I hear better conversations both with kids and teachers than I ever have in my career.....and teachers being more aware of really how the students are doing”. Principal Red acknowledged, when considering her perspective on standards-based practices,
I feel like in the 30 something years I've been an educator, that we've kind of been moving towards this. Maybe you have a wave that moved you forward, and then a backwash that takes you a little bit backwards, and then another wave that moves you forward, and back ... I feel like over the past 30 years, I'm in a place where I see education getting closer to an ideal. I'm just hoping that the back wave isn't too far, the pendulum doesn't start swinging too far again.

These views, in combination with the alignment of their ideal schools to standards-based practices, indicate the much more powerful influence of belief as a driver for their leadership priorities than the role of accountability, which is summarized next.

**Summary of influence of district and state forces.** As the principals worked towards implementing standards-based education, the role of other stakeholders, such as parents, district curriculum personnel, and the superintendent was an important influence, but not as strong an influence as their individual beliefs and school leadership experiences. The accountability measures that these stakeholders brought to the table influenced the principals through supporting their leadership efforts, undermining them, or ignoring them, all of which shaped the choices principals made as they moved forward. The experience of the principals with their superintendents points to two commonalities -- the influence of the superintendent is less impactful than the principal’s belief in what constitutes strong instruction for students, and a positive relationship with the superintendent, including aligning their beliefs, amplifies the principal’s conviction in her/his leadership priorities. Overall, the principal perspectives indicate that the influence of superintendents largely operates as an accelerant to already held or
developing principal beliefs when they are aligned, but, especially for longer tenure
principals who experience superintendent turnover, the influence can diminish as
individually held beliefs grow. All principals indicated that they would not meaningfully
change their leadership priorities if the superintendent had no influence, demonstrating
the stronger role that intrinsic motivation and beliefs play over the role of outside
accountability in the form of a superintendent. Like the superintendents, the curriculum
leaders had weaker influence on the principal leadership than simply the experience of
working closely with teachers and students on a daily basis. For curriculum leaders in
particular, the principals utilized them if they were helpful, but moved them to the
sidelines if their work did not align with the principal’s priorities.

 Principals noted that the perspective of their school board was an influence on
their leadership, but in different ways, either because they had to be convinced of the
effectiveness of their school models, or they were very supportive, which was
appreciated. A strong but somewhat unexpected influence on principal sensemaking - the
role of parent stakeholders - emerged as a factor that did drive principals to consider
changes in school practices, particularly around grading and reporting. All the principals
indicated that parents were strongly influential stakeholders for them, and they would be
willing to make changes to their leadership practice if parents pushed strongly for them,
particularly around grading practices. Although parents and school boards influenced
principal sensemaking, the findings still support the stronger influence of their own
beliefs as drivers of their leadership priorities. When considering the influence of the
state policy in Maine, principals in the study generally credited the original state law for
sparking the movement towards adopting standards-based practices, but felt like the
actual influence on their leadership priorities over time was fairly minimal. Overall, as the principals worked towards implementing standards-based education, the role of other stakeholders, such as parents, district curriculum personnel, the superintendent, and the state leadership, appeared to be an important influence, but not as strong an influence as their individual beliefs and school leadership experiences.
Chapter 5 Discussion, Recommendations, Conclusions

Introduction
The purpose of this study was to describe and analyze how middle school administrators make sense of their role in leading the adoption of standards-based educational practices in their schools. The research applied a theoretical framework of alignment of belief in the value of standards-based education versus the accountability administrators feel from the district/state to lead the change to standards-based education, in an effort to identify how these forces influence the leadership choices made by principals. To illuminate how middle school principals understand standards-based education, and make leadership decisions in their schools, this study explored principal sensemaking through the interaction of three elements, characterized as individual cognition, situated cognition, and the role of policy representations (Spillane, Reiser, et al., 2002). The research also leveraged a frame analysis approach (Benford & Snow, 2000; Snow & Benford, 1988), and state level policy implementation work by (Coburn et al., 2016), to consider how the alignment of belief and sense of accountability interact as elements of principal sensemaking around standards-based reform leadership.

The data for the study were collected from interviews with four middle school principals in the study area of Maine. All the principals met the study criteria, which was that they were principals in their current building for at least three years. The principals were balanced by gender, with two female and two male participants, and all had substantial elements of standards-based practices in place in their schools, including a form of standards-based grading. They participated in three in depth interviews, as well as an initial meeting to establish foundational information, and none were known to the researcher prior to the study. The principals provided thoughtful and insightful
reflections during the interviews, lending validity to the discussion of key findings presented below.

**Discussion of Key Findings**

Key findings from the study were identified primarily by seeking commonalities among the principals, in an effort to identify patterns of sensemaking that can point to some generalities among the principal experiences. They will be organized by research question, and will examined through connections to prior research, in an effort to ground the findings in a larger body of scholarship. The theoretical framework underpins the findings as well, as it provides a basis for moving from examining individual principal beliefs (individual cognition) to school-based leadership context (situated cognition) to the role of district and state accountability (representative cognition). The first three key findings are related to the first research question - How do middle school principals make sense of their role in leading standards-based educational change? These key findings focus on challenges with the language of standards-based education, the role of the principal in collective and individual sensemaking for teachers, and the important role that school context plays in leadership decisions. The last two key findings are related to the second research question - How do the forces of their belief in the value of the standards-based education and their accountability to the district and state to create change affect their leadership practice in the school? These key findings focus on the evidence and influence of principal belief in reform, and the influence of district and state accountability in shaping principal leadership.

**Challenge of language related to standards-based practices.** The first key finding related to the first research question, was the challenge that the use of language
related to standards-based practices posed for principals in the study. Although there were commonalities among the principals, even when faced with a common set of elements of standards-based practices (see Appendix C), there still emerged questions and clarifications about the specific language. There were commonalities for principals around essential elements of standards-based systems, which included the use of common standards, providing intervention systems for students who do not demonstrate mastery of standards, and separating work habits from content knowledge in a grading system. But even within those elements, there were differing interpretations of all those elements, highlighting the challenges in supporting sensemaking in complicated reform efforts.

Grading systems posed a particular challenge for the principals. And there was also some commonality around the challenges with some of the ideals that have been promoted with standards-based systems, particularly allowing unlimited time and personalizing learning to the learner that came to light for principals. Although they could recognize the ideal, they struggled to fit it into the school systems that they were working in on a daily basis, and thus rejected these elements as non-essential in a standards-based system. This finding has implications for policy implementation, and will underpin one of the policy recommendations outlined in a subsequent section.

Complications with the language of standards-based education has been noted by practitioners and researchers, and was explored earlier in the study (Partnership, 2014; Torres et al., 2015). Beyond necessitating the identification of learning standards, the definition of standards-based education (SBE) becomes more diffuse. In general, there is also a belief that it is an integrated system of standards, instruction and assessment that measures student progress towards mastery of the common set of learning standards.
This seemed to align with the principals in the study, as none of the elements presented to them were unfamiliar, and they were able to converse fluently about this general goal of standards-based instruction. However, as implementation research in education has unfolded, the importance of creating a “coherent system of instructional guidance” has been noted (Smith & O’Day, 1990, p. 247). The interpretations of the reform by the ground-level practitioners is critical to successful implementation (Porter et al., 2014). This has implications at both the larger level of state policy implementation, but also within school buildings and across districts. The principals in this study reinforced the necessity of carefully considering how different elements of reform policy are defined and made transparent for practitioners in schools, so as to streamline and accelerate the sensemaking that drives the classroom instruction, for both administrators and teachers.

**Principal Efforts to Mediate Sensemaking for Teachers**

The second key finding related to the first research question was the common evidence presented by the principals of their strong efforts to mediate the collective sensemaking of the practitioners in their buildings, as well as their efforts to support individual teacher sensemaking of the new practices they wanted them to adopt. All the principals in the study provided evidence of their own efforts to both mediate collective teacher sensemaking, through structuring or encouraging access to team based professional learning, and support individual sensemaking, through relationship building with teachers. Research by (Allen & Penuel, 2015) highlights the value of the collective approach, emphasizing that “teachers need opportunities to engage in collaborative and sustained sensemaking” to understand how professional learning aligns to the context of the school goals (p.147). This study also noted that principal support in this “sustained
sensemaking” process with teachers allowed “a kind of coherence they jointly and locally accomplished” in their instructional changes (p.146). This indicates that helping principals see sensemaking as a natural cognitive process, and explicitly supporting it as a leadership strategy, may be an effective approach in habituating new standards-based practices. Another study also examined teacher collective sensemaking, noting that “the principal plays a key role in setting a tone of openness and communication and a focus on teaching and learning that encourage a culture that moves away from isolation toward mutual support around matters of instruction” (Coburn, 2001, p. 163). Evidence from this study supports this conclusion, as principals provided examples of their investment in supporting collaborative understanding of standards-based instruction.

Evidence that principals also supported individual teacher sensemaking was also apparent in this study, through examples of relationship building, working alongside teachers to model new approaches, and encouraging teachers to take risks to try new approaches. Research has demonstrated the importance of these conditions on supporting teacher sensemaking in a reform environment, with Kelchtermans (2005) noting that they play a “key role in teachers’ sense making of their job experiences and thus of educational reform agendas” (p.1003). Other researchers also point to the professional culture of the school as an important component of individual sensemaking, as it allows teachers to have people to turn to with questions, emotional support, and concerns as they seek to support student learning (Coburn, 2001; Louis, Marks, & Kruse, 1996; März & Kelchtermans, 2013; Schmidt & Datnow, 2005). Principals in this study demonstrated their sensitivity to building the professional culture of their schools and supporting
individual teachers, indicating that supporting these practices may accelerate the adoption of novel instructional practices.

**Context Matters in Leadership Decisions**

A third and final key finding related to the first research question, was how closely all principals hewed to the unique context of their school when determining what elements of standards-based practices to adopt. All principals were keenly aware of balancing their own beliefs with the capacity and resources of the school - essentially making a calculation about the “do-ability” of different practices that they might prioritize. This was highlighted in the rejection of elements of personalization of learning that were deemed as perhaps ideal, but not realistic in a public school setting. This finding is supported in research, with Braun, Ball, Maguire, and Hoskins (2011) noting, “by taking context seriously we argue that policies are intimately shaped and influenced by school-specific factors, even though in much central policy making and research, these sorts of constraints, pressures and enablers of policy enactments tend to be neglected” (p. 585). Other researchers have highlighted the importance of understanding the context that shapes the school leadership environment, finding that context matters (Clarke & O’Donoghue, 2017; Hallinger, 2016; Lee & Hallinger, 2012; Osborn et al., 2002; Veelen, Sleegers, & Endedijk, 2017). This notion of contextual leadership has not been established as a theory, like instructional leadership, but it is a thread that seems to weave itself through studies, as researchers try to describe specific facets of complex leadership behaviors. It appears in this study as a central feature of principal leadership and decision-making in their individual middle schools, and a key component of principal sensemaking.
Influence of Belief in Principal Leadership

The fourth key finding in the study is related to answering the second question posed for principals in the research study - How do the forces of their belief in the value of the standards-based education and their accountability to the district and state to create change affect their leadership practice in the school? This finding supports the idea that a principal’s belief in the reform efforts that they are tasked with enacting is a substantially stronger influence on their leadership priorities than a sense of accountability they may feel. Through the study, the principals revealed strong alignment in their perspectives about essential elements in standards-based practices to practices that they would include in their “ideal” school. This indicates that the individual beliefs that they carry into their current principal leadership role strongly shape their leadership priorities. As research has drawn a line from principal instructional leadership to a growth in teacher self-efficacy - the sense that what they do is important and meaningful - it seems reasonable to assume that the principal’s belief about a reform effort is an influential driver of reform (Goddard, Goddard, Kim, & Miller, 2015; Mehdinezhad & Mansouri, 2016; Sehgal & Nambudiri, 2017). Throughout the interview process, principals provided evidence of strong beliefs in the practices they were enacting, which is in contrast to their perceptions about the role of district accountability, which forms the basis for the next key finding.

Influence of Accountability in Principal Leadership

The fifth and final key finding was the relatively small influence that district and state stakeholders held in the enactment of principal leadership priorities. As part of the theoretical framework, the “role of policy stimuli in implementing agents’ sense-making”
(Spillane, Reiser, et al., 2002, p. 389) was an important element to consider. However, the principal perspectives indicate that the influence of district superintendents largely operates as an accelerant to developing or already held principal beliefs when they are in alignment, but, especially for longer tenure principals who experience superintendent turnover, the influence can diminish as individually held beliefs grow. All principals indicated that they would not meaningfully change their leadership priorities if the superintendent had no influence, demonstrating the stronger role that intrinsic motivation and beliefs play over the role of outside accountability in the form of a superintendent.

The influence of the state policy in Maine was diminished even further, with principals in the study generally crediting the original state law for sparking the movement towards adopting standards-based practices, but reporting that the actual influence on their leadership priorities over time was fairly minimal. It is important to note that in the study area of Maine, there is a strong tradition of local school district control over matters of curriculum and instruction, which may cause an further dampening of the influence of state reform mandates. However, the diminished influence of the state can be seen as further support of the role of principal’s beliefs, as all the principals prioritized the standards-based practices even though they had the choice not to. In addition, the passage of LD1666, which essentially repealed the proficiency-based diploma law in Maine, appeared to have little influence on the leadership priorities of principals in the study. This again suggests that belief in a reform effort is a much stronger motivator for principal leadership than systems of accountability.
Recommendations for Policy Improvement

Nationally, over the past few decades, standards-based school reform has taken root as a policy initiative and instructional model. Standards-based reform advances the use of learning standards and aligned assessments that bring consistency and clarity to public school curriculum and instruction, with the intention of raising student achievement. In Maine, the Legislative passage of L.D.1422, *An Act to Prepare Maine People for the Future Economy* in May 2012 marked Maine’s entry into this new era of standards-based reform. With this law, Maine districts were required to award proficiency-based diplomas by 2018. The primary driver of a proficiency-based diploma was the belief that it represented the full flowering of the standards-based reform effort in progress in Maine and across the nation. The policy was soon mired in implementation difficulties, resulting in significant revisions in an effort to keep it alive. With the passage of LD1666, *An Act to Ensure the Successful Implementation of Proficiency-based Diplomas*, districts were allowed to choose a proficiency diploma system or a traditional system (Kornfield, 2018). For the past six years, schools across the state of Maine have been in various stages of implementation. District leaders have taken different approaches to meet their interpretation of a proficiency-based system. The retreat of the Maine Legislature raised many questions for schools, particularly high schools. The legislative retreat, which happened immediately preceding my interviews, provided an interesting policy context for the research. For all the principals, the repeal of the law did not signal an urgent need to change their building priorities. Each continued to lead his or her school based on their beliefs about standards-based practices. Although there are many potential policy recommendations for a complicated reform
effort such as standards-based education, I derived my recommendations from the principals’ commonalities as leaders of their own buildings.

**Recommendation 1: Consistent Language.** A new model of educational reform benefits from close consideration of the language used to describe the practices. Even with the small sample size of principals in schools of relative proximity, principals had different interpretations of closely related concepts related to standards-based practices. When practitioners feel like they are speaking different languages, valuable time and energy that could be directed towards learning new approaches are spent clarifying language. The result renders a good idea suspect by both administrators and classroom teachers. Careful consideration of the language used in the reform model is critical as policy makers, districts, and even administrators plan to enact policy. For example, an educational consulting group, which has considerable influence on developing proficiency-based diploma models, used language that was not aligned with the Common Core State Standards. This increased confusion when educators across the state collaborated on developing proficiency-based diplomas.

Interestingly, the principals all agreed on the concept of providing intervention-based reteaching opportunities for students. Their common understanding was consistent with the Response to Intervention (RtI) movement across the country. The principals did not describe the intense, data-driven instructional interventions that high quality RtI systems purport. However, they understood the necessity of providing students with more time with instruction, and they established school structures to provide it. Perhaps the consistent use of RtI language over the past decade has solidified the concept, if not the specific practices. A valuable investment in supporting consistent interpretations and
effective implementation is spending time for educators to decide what language and concepts in a new policy need to be clear and consistent.

**Recommendation 2: Consider Translation of Concept to Classroom.** All principals in the study were deeply engaged in how concepts of standards-based practices would be actualized at the classroom level, including the ability of their teachers to take on new learning. There is a need for policy to address the capacity of public schools to provide educators with human resources and time on learning. This was highlighted as the principals in the study considered the idea of personalizing learning for students.

Personalization of learning is a concept that has been gathering momentum in the educational landscape, particularly as online learning platforms have become more sophisticated. A recent blog post from the U.S. Department of Education Office of Educational Technology noted that implementing personalized learning also suffers from challenges with language, stating that “the lack of a consistent definition and language for a relatively complex idea has hampered both understanding and effective implementation” (Office of Ed Tech, n.d.). The principals stated that the practice of personalized learning was not apparent in their schools, and not a leadership priority for any of them. The ideal of personalized learning was strongly supported by two of the principals, but the practicality of it was suspect.

The Maine Cohort for Customized Learning (“Maine Cohort for Customized Learning,” n.d.) promotes a practice of personalization that, when translated to a school setting was rejected by the principals. They saw packets of worksheets that students moved through at their own pace, leaving the classroom teacher to manage learners as individuals, losing opportunities for whole class instruction or discussion. Principals are
practical by nature and their sensemaking around new instructional practices is deeply rooted in what is possible and practical given the capacity of their schools. Any new policy needs to account for resources available in schools, break down the models into reasonable steps for the ground-level practitioners, and focus on supporting the principal who articulates a coherent model in the context of their school environment. Leading with a great idea is motivating and captures the imagination of educators. But policy makers should also be ready to provide reasonable, coherent next steps that allow educators to move towards the idea without frustration and resistance.

**Recommendation 3: Engage Educators in Experiences.** By illuminating how the principals developed their beliefs about the value of standards-based practices, the importance of experiential engagement with new ideas and models was apparent. For all the principals, visiting schools and hearing from credible sources, such as other principals, was very influential in bridging ideas and practical models. An implementation plan needs to support the sensemaking of the principals as the instructional leaders in their buildings. Providing theory is not enough. Principals benefit from opportunities to promote risk-taking and directly engage with models. As one research study found, “When teachers observe active attempts on the part of administrators to make sense of a policy and mold it to local conditions, they appear to be more willing to engage in the elaboration of its implications for their school and classroom” (Louis, Febey, & Schroeder, 2005, p. 200). All the principals shared leadership practices that supported teachers to try new practices. The process of building trust, trying, failing, then adjusting is a valuable one. As the most important “translator” of new ideas, the principal is a key player in framing how new ideas will be enacted in
the classroom. Policy-makers, who develop new reform efforts, benefit from building the understanding of principals in ways that allow them to directly engage in the new practices, and find support in credible sources.

**Recommendation 4: Grading Practices.** The incorporation of new grading and reporting practices in their schools was an area of challenge and angst for all the principals in the study. Policy that directly or indirectly impacts how teachers grade and report progress is inevitably a messy arena. In Maine, disagreement with the proficiency-based diploma law largely coalesced around changes in high school grading and reporting ("Maine went all in on proficiency-based learning — then rolled it back," 2018). For principals and teachers, grading and reporting is their public window into their classroom practices. Principals rely on classroom teachers being able to explain how they are assessing and documenting student progress to parents. If the teachers are unsure, parents and students will be unsure, which creates distrust, and eventually, retreat from unfamiliar practices. The principals in the study worked constantly to communicate new approaches to parents and other stakeholders, and to support teachers in understanding and investing in new practices. New policy cannot neglect a close consideration of how new concepts will impact grading, knowing from experience that it is a minefield for parents, teachers, that building administrators must carefully navigate.

**Recommendations for Further Research**

This study adds to the body of policy implementation research by looking closely at how principals translate policy into leadership decisions. Research demonstrates that principals have a strong impact on teacher and student learning, but not enough attention has been paid to how this process unfolds. This continues to be a fruitful area for further
study, as the translation of policy initiatives are unique in each school. Why an emphasis on supporting principals and teachers interpreting policy at the local level in order to advance student learning? According to (Kyriakides et al., 2015) “The main assertion is that increasing schools' authority and flexibility will allow for the development of better and more effective educational processes which are more likely to correspond to local needs. School stakeholders are better aware of their school needs and may therefore be more able to direct effort, resources, and educational processes more efficiently to meet them” (p. 113). A valuable area of future study is research on how to support school stakeholders in ways that directly impact student learning. Sensemaking theory provides a useful frame for this work.

One other area of future research is the experience of leading standards-based change at levels in a school system other than middle school. My decision to study sensemaking of middle school principals in Maine was intentional. My decision was driven largely by the educational policy landscape in the state, which was focused on fulfilling a state mandate to provide proficiency-based diplomas to Maine high school graduates. I thought that middle school principals were buffered from the mandate, as they were playing a supporting role to the high schools. I predicted that their sensemaking around leading standards-based reform would be sensitive to the impact of their beliefs versus the impact of the accountability system. However, examining the experience of principals in other grade spans may be an interesting area of future research, particularly in the study area of Maine, where districts and high school principals are now deciding whether to maintain their standards-based systems or retreat from them. In other areas of the country, where adopting standards-based practices is
still largely left to principal and district decision, examining the forces that drive principal sensemaking at other grade spans would add to the understanding of how educational reform efforts are advanced at the building level.

Conclusion

The purpose of this study was to describe and analyze how middle school administrators make sense of their role in leading the adoption of standards-based educational practices in their schools, and to look more closely at how their leadership was influenced by their beliefs in the reform efforts they were leading, and the accountability they felt to lead the reform efforts. The findings supported that principal leadership of standards-based educational practices was more strongly influenced by belief than accountability, and those beliefs were built through experiential engagement with new ideas. The challenge of policy makers is, according to (McLaughlin, 1987) is that they "can't mandate what matters." He goes on to state that

We have learned that policy success depends critically on two broad factors: local capacity and will. Capacity, admittedly a difficult issue, is something that policy can address. Training can be offered. Dollars can be provided. Consultants can be engaged to furnish missing expertise. But will, or the attitudes, motivation, and beliefs that underlie an implementor's response to a policy's goals or strategies, is less amenable to policy intervention. (p.172)

This means that administrator and educator beliefs should be considered in policy development. Taking the time to consider the beliefs and attitudes of educators on the front lines of educational reform should be the primary consideration for effective policy
implementation for new and complicated ideas. Continuing to try to understand how school administrators interpret standards-based educational practices, and how their interpretations are reflected in their school leadership practices, is a crucial component in identifying how changes in educational policy at a national and state level result in school and classroom level changes in instruction for students.
References


https://doi.org/10.14507/epaa.v16n9.2008


Louis, K. S., Mayrowetz, D., Smiley, M., & Murphy, J. (2009). The role of sensemaking
and trust in developing distributed leadership. In Distributed leadership (pp. 157–180). Springer Dordrecht.


Sullivan, S. C. (2015). Shifting Educational Paradigms: From Traditional to Competency-


publications.

Appendix A

Theoretical Framework and Card Sort Details-Theoretical Framework-Sensemaking and Frame Analysis

<table>
<thead>
<tr>
<th>Frame Analysis (Benford &amp; Snow, 2000)</th>
<th>Sensemaking Theory (Spillane, Reiser, et al., 2002)</th>
<th>Role of Representations-Policy Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Cognition Interview #1 Protocol</td>
<td>Situated Cognition Interview #2 Protocol</td>
<td>Diagnostic - Accountability in District Context Purpose: Examine current instructional leadership priorities as influenced by district.</td>
</tr>
<tr>
<td>Diagnostic Framing-Individual Belief Purpose: Establish understanding of proficiency based learning</td>
<td>Diagnostic - Belief in School Context Purpose: Examine instructional leadership successes.</td>
<td>CARD SORT: Instructional Leadership Elements of PBL Context Provided to Principal: Current school setting.</td>
</tr>
<tr>
<td>CARD SORT: Elements of PBL</td>
<td>CARD SORT: Instructional Leadership Elements of PBL</td>
<td>CARD SORT CATEGORIES: Highly Successful in My School Moderateley Successful in My School Not Successful in My School</td>
</tr>
<tr>
<td>SORT CATEGORIES: Essential PBL element Nice to have PBL element Not Essential</td>
<td>Interview Q's: -Why did you arrange the cards like you did? Describe your thinking. -Are there important elements of a PBL system that you think are missing from your options? What are they? -Do you believe PBL systems will improve learning for students? What prior experiences have you had that inform this belief? Essential Question: What do you believe are essential elements of a proficiency based learning system and</td>
<td>Interview Q's: -Given how you arranged the cards in our last session, which I've provided here, what priorities are most influenced by your superintendent? Other district leadership? -What changes would you make to the card arrangement, if the superintendent had no influence on your choices? -Are there other leadership priorities that you would like to share? Essential Question: What elements of a proficiency based learning system are you currently prioritizing due to influence of other district leadership?</td>
</tr>
<tr>
<td>Interview Q's: -Why did you arrange the cards like you did? Describe your thinking. -Are there important elements of a PBL system that you think are missing from your options? What are they? -Do you believe PBL systems will improve learning for students? What prior experiences have you had that inform this belief? Essential Question: What do you believe are essential elements of a proficiency based learning system and</td>
<td>Interview Q's: -Why did you arrange the cards like you did? Describe your thinking. -What leadership activities from the cards do you feel are most successful in your school? -What other important leadership priorities are you currently undertaking in your school that you feel are successful? Essential Question: What elements of a proficiency based learning system are currently successful in your school?</td>
<td>Interview Q's: -Why did you arrange the cards like you did? Describe your thinking. -What leadership activities from the cards do you feel are most successful in your school? -What other important leadership priorities are you currently undertaking in your school that you feel are successful? Essential Question: What elements of a proficiency based learning system are currently successful in your school?</td>
</tr>
<tr>
<td>Prognostic Framing - proposed solution and strategies</td>
<td>Prognostic - Individual Belief</td>
<td>Prognostic - Belief in School Context</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Purpose: Examine instructional leadership beliefs.</td>
<td>Purpose: Examine instructional leadership priorities - What do you prioritize?</td>
<td>Purpose: Examine influence on current instructional leadership priorities by district or state.</td>
</tr>
<tr>
<td><strong>CARD SORT:</strong> Instructional Leadership Elements PBL</td>
<td><strong>CARD SORT:</strong> Instructional Leadership Elements PBL</td>
<td><strong>Interview Q's:</strong></td>
</tr>
<tr>
<td>Context Provided to Principal: Ideal school setting, not current setting.</td>
<td>Context Provided to Principal: Current school setting and staff.</td>
<td>- How do the district administration’s view influenced what you have prioritized as actions in your school?</td>
</tr>
<tr>
<td><strong>SORT CATEGORIES:</strong></td>
<td><strong>SORT CATEGORIES:</strong> High Leadership Priority, Medium Leadership Priority, Low Leadership Priority</td>
<td>- What have you proposed as solutions/strategies based on this influence?</td>
</tr>
<tr>
<td>High Leadership Priority</td>
<td>Medium Leadership Priority</td>
<td>- What influences your leadership choices more - your superintendent or the state proficiency based diploma law?</td>
</tr>
<tr>
<td>Medium Leadership Priority</td>
<td>Low Leadership Priority</td>
<td>- Are there other stakeholders who influence your leadership choices?</td>
</tr>
<tr>
<td>Low Leadership Priority</td>
<td></td>
<td>- If you could, what would you change about the law and its influence on school instruction?</td>
</tr>
<tr>
<td><strong>Interview Q's:</strong></td>
<td></td>
<td>- How have the recent changes enacted by the state legislature influenced your perspective on how you will lead your school moving forward?</td>
</tr>
<tr>
<td>- Why did you arrange the cards like you did? Describe your thinking.</td>
<td>- Why did you arrange the cards like you did? Describe your thinking.</td>
<td>- What would you change about how state policy expectations are delivered to school leaders? What would help make a policy be enacted more successfully in schools?</td>
</tr>
<tr>
<td>- What other important leadership priorities would you undertake in your “ideal” school?</td>
<td>- What other important leadership priorities would you undertake in your “ideal” school?</td>
<td><strong>Essential Question:</strong> What changes would you make to your leadership priorities, if the proficiency-based diploma mandate did not exist?</td>
</tr>
<tr>
<td>- Why would you make those choices? Describe your thinking.</td>
<td>- Why would you make those choices? Describe your thinking.</td>
<td><strong>Essential Question:</strong> What instructional leadership priorities do you choose, knowing the staff you are working with?</td>
</tr>
<tr>
<td>- What prior experiences have shaped your beliefs about effective teaching and learning?</td>
<td>- What prior experiences have shaped your beliefs about effective teaching and learning?</td>
<td><strong>Essential Question:</strong> In your ideal school setting, what do you believe promotes effective learning?</td>
</tr>
<tr>
<td><strong>Essential Question:</strong> What instructional leadership priorities do you choose, knowing the staff you are working with?</td>
<td><strong>Essential Question:</strong> What instructional leadership priorities do you choose, knowing the staff you are working with?</td>
<td><strong>Interview Q’s:</strong></td>
</tr>
</tbody>
</table>

- How do the district administration’s view influenced what you have prioritized as actions in your school?
- What have you proposed as solutions/strategies based on this influence?
- What influences your leadership choices more - your superintendent or the state proficiency based diploma law?
- Are there other stakeholders who influence your leadership choices?
- If you could, what would you change about the law and its influence on school instruction?
- How have the recent changes enacted by the state legislature influenced your perspective on how you will lead your school moving forward?
- What would you change about how state policy expectations are delivered to school leaders? What would help make a policy be enacted more successfully in schools?
<table>
<thead>
<tr>
<th>Motivational Framing - rationale for engaging in action</th>
<th>NOT ADDRESSED</th>
<th>Motivational - Belief in School Context</th>
<th>Motivational - Accountability in District Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose: Examine how principal communicates instructional leadership priorities.</td>
<td><strong>Context Provided to Principal:</strong> Current school setting and staff.</td>
<td><strong>Context Provided to Principal:</strong> Current school/district setting.</td>
<td></td>
</tr>
<tr>
<td><strong>Interview Q's:</strong> -How do you motivate your teachers to engage in the changes you want to make? What strategies do you use?</td>
<td><strong>Interview Q's:</strong> -How do you motivate your staff to engage in the changes you want or have to make?</td>
<td>Essential Question: What message do you give to your teachers to inspire them to change to meet your priorities, as influenced by the district and state?</td>
<td></td>
</tr>
<tr>
<td>Essential Question: What message do you give to your teachers to inspire them to change to meet your priorities?</td>
<td>Essential Question: What message do you give to your teachers to inspire them to change to meet your priorities?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Interview Protocols

#1 Protocol *Individual Cognition*

**Diagnostic-individual Belief Section**
- Introductions
- Explanation of structure of this interview section
  - This interview is focused on you as an individual, and your beliefs about proficiency-based learning. Because Maine uses the term proficiency-based learning, we will also use that during our interviews. But it can also be considered synonymous with standards-based education. Our first section of the interview will help us establish a common understanding before we do the other interviews, to help us make sure we are consistent in our language and understanding.
  - This first part of the interview will consist of a card sort. I will give you a number of statements, and ask you to place them in one of three different categories. There is no right or wrong answer. I am just trying to gain some understanding about your interpretations of proficiency-based learning. I will give you some time to read and make your decisions, then I will ask some questions about the choices you made.

**CARD SORT: Elements of PBL**

Interview Q's:
- Why did you arrange the cards like you did? Describe your thinking.
- Are there important elements of a PBL system that you think are missing from your options? What are they?
- Do you believe PBL systems will improve learning for students?
- What prior experiences have you had that inform this belief?

**Prognostic - Individual Belief**
- Explanation of structure of this interview section
  - This interview section is focused on your individual leadership beliefs. Specifically, what choices you might make if you were able to be the principal of your ideal school. I am going to ask you to do another card sort followed by questions with this ideal school in mind. Again, there is no right or wrong answer.
  - I want you to take a moment to think about being a principal of a school that you designed from the ground up, that took whatever structure you wanted, and was staffed with teachers who shared your beliefs. Take a moment to think about what this ideal school would be like.

**CARD SORT: Instructional Leadership Elements PBL**

Context Provided to Principal: Ideal school setting, not current setting.

Interview Q's:
- Why did you arrange the cards like you did? Describe your thinking.
- What other important leadership priorities would you undertake in your “ideal” school?
- Why would you make those choices? Describe your thinking.
- What prior experiences or colleagues have shaped your beliefs about effective teaching and learning?
Interview #2 Protocol  Situated Cognition

Diagnostic - Belief in School Context Section
- Introductions
  - Explanation of structure of this interview section
    - This interview is focused on you as the leader of your school. The first part of the interview will consist of a card sort. I will give you a number of statements, and ask you to place them in one of three different categories. There is no right or wrong answer. I am just trying to gain some understanding about your school leadership priorities. I will give you some time to read and make your decisions, then I will ask some questions about the choices you made.
    - I want you to take a moment to think about being a principal of your school, and the teachers you have in the building. For this first card sort, I would like you to think about proficiency-based leadership elements that you have undertaken and that you believe have been successful. I will ask you to sort the cards into three categories that show the level of success you feel like each of these elements have had in your building.

CARD SORT: Instructional Leadership Elements PBL, Categories of Success

Interview Q's:
- Why did you arrange the cards like you did? Describe your thinking.
- What leadership activities from the cards do you feel are most successful in your school?
- What other important leadership priorities are you currently undertaking in your school that you feel are successful?

Prognostic & Motivational - Belief in School Context
- Explanation of structure of this interview section
  - This interview section is again focused on you as the leader of your school. I am going to ask you to sort the same cards, but into different categories, based on how you lead in your school, and what priorities you set. Many of these may be similar to the prior card sort, but some may not. For example, you may have leadership priorities, but don't see them as unfolding successfully in your school. The card sort will again be followed by some questions to help me gain more understanding.
  - I want you to take a moment to think about being a principal of your school, and leading with the same teachers that you currently have, with all their strengths and weaknesses. What would you prioritize in your leadership, to help your school improve?

CARD SORT: Instructional Leadership Elements PBL, Categories of Priorities

Interview Q's:
- Why did you arrange the cards like you did? Describe your thinking.
- How are your leadership successes and leadership priorities the same? Different?
- What other professional learning have you prioritized in your building?
- Why have you made these choices? Describe your thinking.
- Tell me about the history of professional development related to standards-based learning in your school.
- What do you see as your role in leading the professional learning in your building?
- How do you motivate your teachers to engage in the changes you want to make? What strategies do you use?
Interview #3 Protocol  Role of Policy Representations

Diagnostic - Accountability in District Context

- Introductions
- Explanation of structure of this interview section
  - This interview is focused on you as the leader of your school, influenced by and accountable to all stakeholders. The first part of the interview will consist of revisiting a card sort. We will revisit your card sort from the last interview, and explore your thoughts about your choices more deeply, particularly about how the superintendent and district influence your leadership decisions.

CARD SORT: Instructional Leadership Elements PBL (arrange the cards as last session)

Interview Q’s:
- Given how you arranged the cards in our last session, which I’ve provided here, what priorities are most influenced by your superintendent?
- What changes would you make to the card arrangement, if the superintendent had no influence on your choices?
- Are there other leadership priorities that you have undertaken that you would like to share?

Prognostic & Motivational - Accountability in District Context

Interview Q’s:
- How do the district administration’s view influenced what you have prioritized as actions in your school?
- What have you proposed as solutions/strategies based on this influence?
- What influences your leadership choices more - your superintendent or the state proficiency based diploma law?
- Are there other stakeholders who influence your leadership choices?
- If you could, what would you change about the law and its influence on school instruction?
- What would you change about how state policy expectations are delivered to school leaders? What would help make a policy be enacted more successfully in schools?

MOTIVATION

- How do you motivate your staff to engage in the changes you want or have to make?
- How does the superintendent’s or state’s view shape your rationale for motivating teachers to action?
Appendix C

Card Sort Questions

Card Sort #1: PBL Elements (Diagnostic-Belief): *This sort used only once.*

Place these statements in one of 3 categories:

**Essential PBL element** - mission critical to success.
**Nice to have PBL element** - the system would be stronger with this, but it’s not essential
**Not Essential** - it could be missing and still have an effective system.

- Students must have multiple opportunities to demonstrate what they know - they should always be allowed to redo tasks and retake assessments (*learning as constant, time as variable*).
- If asked, students must be able to describe the standard they are working towards in class (*clarity*).
- If asked, students must be able to describe what they personally need to do to meet the standard (*feedback*).
- All standards must be broken down to a set of learning targets that are shared with students (*clarity*).
- All teachers in a content area and level must use the same set of learning targets (*consistency*).
- Students must have a variety of assessment options to demonstrate what they have learned (*multiple pathways to mastery*).
- Students must have opportunities to get reteaching or other intervention opportunities if they still aren’t demonstrating mastery of a standard (*learning as constant, time as variable*).
- Students must not move on to the next standard if they haven’t shown mastery of the prior standard - learning tasks should always be personalized to the needs of the individual learner (*personalization*).
- In the grading system, students must have mastery of standards (what they can show in assessments) separated from work habits (how they get there, such as homework completion) (*clarity and assessment*).
- Students must be allowed to have as much time as they need to demonstrate mastery of a standard (*learning as constant, time as variable*).
- Students must have a non-traditional grading system - not a 0-100 scale or A-F letter grades (*assessment and reporting*).

Card Sort #2: PBL Instructional Leadership Elements (Prognostic - Belief) - *This sort used three times, with principal provided a different context each time.*

See sort categories below, depending on context provided to principal:

- Create an expectation that teachers provide multiple opportunities for students to demonstrate what they know - they should always be allowed to redo tasks and retake assessments (*learning as constant, time as variable*).
• Creation of a clear scope and sequence of learning standards across the school (clarity and consistency)
• Creation of clear scoring guidelines for all learning standards (clarity and consistency)
• Create an expectation for teachers that students must be able to describe what they personally need to do to meet the standard (feedback).
• Create an expectation that all standards must be broken down to a set of learning targets that are shared with students (clarity).
• Create an expectation that all students must have a variety of assessment options to demonstrate what they have learned (multiple pathways to mastery).
• Development of an intervention system that allows students to have opportunities to get reteaching or other support if they still aren’t demonstrating mastery of a standard (learning as constant, time as variable).
• Create an expectation that all students must not move on to the next standard if they haven’t shown mastery of the prior standard - learning tasks should always be personalized to the needs of the individual learner (personalization).
• Develop a grading system that allows students to have mastery of standards (what they can show in assessments) separated from work habits (how they get there, such as homework completion) (clarity and assessment)
• Create an expectation that students must be allowed to have as much time as they need to demonstrate mastery of a standard (learning as constant, time as variable).
• Development of a non-traditional grading system, not a 0-100 scale or A-F letter grades (assessment and reporting)

**Individual Cognition + Prognostic - Individual Belief**
Place these statements in one of 3 categories:
**High Leadership Priority** - This would be at the top of my list of expectations and learning for my teachers.
**Medium Leadership Priority** - This is something we would try to get to if we had time.
**Low Leadership Priority** - I wouldn’t actively make this an expectation for my teachers.

**Situated Cognition + Diagnostic - Belief in School Context**
Place these statements in one of 3 categories:
**Highly Successful Priority in My School** - We are doing a great job at putting this in place.
**Moderately Successful Priority in My School** - Some teachers are consistently doing this.
**Not a Successful Priority in My School** - This is not something we do well or consistently.

**Situated Cognition + Prognostic - Belief in School Context**
Place these statements in one of 3 categories:
**High Leadership Priority** - This would be at the top of my list of expectations and learning for my teachers.
**Medium Leadership Priority** - This is something we try to get to if we had time.
**Low Leadership Priority** - I wouldn’t actively make this an expectation for my teachers.
Appendix D

Informed Consent Forms

University of Southern Maine

CONSENT FOR PARTICIPATION IN RESEARCH

Project Title: An Examination of How Middle School Principals Make Sense of their Role in Leading Standards-Based Educational Reform

Principal Investigator(s): Barbara Maling, Doctoral Student; Catherine Fallona, PhD, Dissertation Committee Chair and USM Faculty Member

Introduction:
• Please read this form, you may also request that the form is read to you. The purpose of this form is to provide you with information about this research study, and if you choose to participate, document your decision.
• You are encouraged to ask any questions that you may have about this study, now, during or after the project is complete. You can take as much time as you need to decide whether or not you want to participate. Your participation is voluntary.

Why is this study being done?
• The purpose of this study is to describe and analyze how middle school administrators make sense of their role in leading the adoption of standards-based educational practices in their schools. This study will involve research, and data will collected through a series of interviews with middle school principals.

Who will be in this study?
• Four active middle school principals will participate in this study. The criteria to participate in the study includes the following elements, and you have been identified as a potential participant that meets the criteria:
  • Have been the building principal for at least 3 years,
  • Ideally, have been a building administrator in a previous school,
  • And are in the midst of some form of standards-based (proficiency-based) change efforts in the building that you are leading.

What will I be asked to do?
• You will be asked to participate in three in-depth interviews with the researcher, in an effort to gain a full and rich understanding of your perspective as a leader of standards-based (proficiency-based) reform efforts in your building. These interviews are recorded, and will be transcribed verbatim. The interview questions are generated by the researcher, following a specific framework, which can be shared with you if desired.
• These interviews can be scheduled around your availability, and the goal is to complete them in the summer of 2018.
• You will be invited to also share any relevant documents that might illuminate your leadership efforts (e.g. faculty meeting agendas, parent information, etc.) If you provide information via your school website that is relevant to your leadership, you will be invited to comment on that information also.
• After the interviews are completed, you will be provided initial interpretations made by the researcher, so you can have the opportunity to verify if the interpretations accurately reflect your responses. Identify any procedures or interventions that are experimental or unusual.
• You will receive no reimbursement or compensation for participation in this project.

What are the possible risks of taking part in this study?
• Although no identifying information of you as a participant, or your school and district, will be used at any point during data collection or analysis, there is a risk, because Maine is a small state, that you could be identified by deduction or process of elimination.
• Efforts will be made to use vague descriptors of schools and districts, to mitigate the chance that you or your school could be identified.
• Interviewing may be an uncomfortable process for you. The questions asked are centered around school leadership activities, and are not deeply personal. If at any point you would like to terminate the interview, that is acceptable. The role of the researcher is to capture your perspective, not make you feel uncomfortable in any way.
• This research is minimal risk research, and no more than one encounters in daily life, and all information will be kept secure at all times.

What are the possible benefits of taking part in this study?
• Although there is no direct benefit to you as a participant in the study, the findings may be of benefit to future middle school principals and state policymakers.

What will it cost me?
• You are not expected to incur any costs, including travel, as a result of participation in the research. The researcher will travel to you for interviews, at a location of your choosing.

How will my privacy be protected?
• Care will be taken to create vague descriptors of the individuals, schools, and districts to mitigate the possibility of participants being identified, given the small population in the study region.
• Identifying data for participants will be kept separate, confidential, and secure at all points during the process.
• Participants will be able to choose the location for interviews.
• Preliminary results will be shared with participants to verify that the interpretations are valid and reflective of participant responses.
Final results and findings will be shared in a doctoral dissertation, which will be published on ProQuest, a database for theses and dissertations.

How will my data be kept confidential?
- This study is designed to be not include any identifying information about participants, so this means that no one can link the data you provide to you, or identify you as a participant.
  - Interviews will be recorded and transcribed by an online service known as Rev.com. A client non-disclosure form has been signed and is on file at Rev.com, assuring that your interview responses will not be shared by Rev.com. No one will have access to your recordings but the researcher, and they will be erased from the Rev.com site soon after they are transcribed, and erased from the secure USM Box cloud storage as soon as the study is complete and accepted by USM.
  - You and your school will be given a pseudonym, which will be used in all electronic records. A paper copy that links your name to the pseudonym will be stored separately from any electronic records, in a secure setting.
  - Records will stored in a secure cloud setting at USM (Box), which is only accessible by the researcher.
  - Data will be coded and analyzed using the pseudonyms provided and with only vague descriptors of the school district.
  - You will have access to preliminary findings after interviews are conducted, to assure that interpretations are valid and reflect your responses. Final findings will be published in the researcher’s dissertation.
  - Your data will not be used for future research purposes.
- Please note that the Institutional Review Board may review the research records.
- A copy of your signed consent form will be maintained by the principal investigator for at least 3 years after the project is complete before it is destroyed. The consent forms will be stored in a secure location that only members of the research team will have access to and will not be affiliated with any data obtained during the project.

What are my rights as a research participant?
- Your participation is voluntary. Your decision to participate will have no impact on your current or future relations with the University.
- You may skip or refuse to answer any question for any reason.
- If you choose not to participate, there is no penalty to you and you will not lose any benefits that you are otherwise entitled to receive. You are free to withdraw from this research study at any time, for any reason. If you choose to withdraw from the research there will be no penalty to you and you will not lose any benefits that you are otherwise entitled to receive.
- You will be informed of any significant findings developed during the course of the research that may affect your willingness to participate in the research through a member check after the three interviews (described above).
• If you are unable to complete the interviews, your participation may be terminated by the investigator without your consent, as the data would not be valid or usable in the research study.

What other options do I have?
• You may choose not to participate.

Whom may I contact with questions?
• The researcher conducting this study is doctoral student Barbara Maling, under the supervision of USM Faculty Dr. Catherine Fallona. For questions or more information concerning this research you may contact them at [Barbara Maling - 207-590-8152, barbara.maling@maine.edu and Catherine Fallona - 207-415-8874 catherine.fallona@maine.edu]
• If you choose to participate in this research study and believe you may have suffered a research related injury, please contact Catherine Fallona at 207-415-8874, or catherine.fallona@maine.edu
• If you have any questions or concerns about your rights as a research subject, you may call the USM Human Protections Administrator at (207) 228-8434 and/or email usmorio@maine.edu.

Will I receive a copy of this consent form?
• You will be given a copy of this consent form.

Participant’s Statement
I understand the above description of this research and the risks and benefits associated with my participation as a research subject. I agree to take part in the research and do so voluntarily.

Participant’s signature

Printed name Date

Researcher’s Statement
The participant named above had sufficient time to consider the information, had an opportunity to ask questions, and voluntarily agreed to be in this study.

Researcher’s signature

Printed name Date
Appendix E: Analytic Codes Used

Representative Cognition - Accountability w/in District Context
  Influence of Curriculum Director
  Influence of State Mandate
  Influence of Superintendent
  Other Influences (e.g. parents)
  Policy Thoughts

Individual Cognition - Individual Belief
  Important PBL Elements in Ideal School
  Influenced Individual PBL Beliefs

Situated Cognition - Belief Within School Context
  Leadership Priorities
  Process of Moving Teachers to Proficiency System
  Successful Leadership to Proficiency

Essential Elements of PBL
Grading Reflections
Missing Element
Personalization and Time Issues
Great Quotes