INSIGHTS INTO EDUCATION’S RACE TO THE TOP: CORRELATIONAL SURVEY EXPLORING PERCEPTIONS OF ORGANIZATIONAL CULTURE AND CHANGE AMBIVALENCE DURING THE IMPLEMENTATION OF A MANDATED PERFORMANCE EVALUATION SYSTEM IN A NORTHEAST U.S. SCHOOL DISTRICT

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by
Andrea B. Schwamb
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Northeastern University
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Abstract

American public schools are currently facing a new mandated evaluation system that will create substantial change by requiring districts to evaluate professional staff based on two quantified measures: (a) state testing, and (b) a district determined measure. Although reforms have been at the forefront of policymakers’ agendas, these initiatives have continued to fail. This quantitative study examined the relationship between perceived organizational culture and change ambivalence. The study was non-experimental and correlational in design. The conceptual framework was formulated through the lens of a systems theorist. One hundred and fifty professional school staff completed the Organizational Culture Survey and Change Ambivalence Scale. The seven composite variables were involvement, consistency, adaptability, mission, cognition, intention, and emotion. Relationships between some of the variables were indicated through Pearson Correlation (2-tailed). Those included: (a) Denison’s involvement and Piderit’s cognition (.031), intention (.001), positive (.001), and negative emotions (.008); (b) Denison’s consistency and Piderit’s intention (.026) and negative emotion (.017); and (c) Denison’s adaptability and Piderit’s negative emotions (.001). Overall results established some relationships between professional schoolteachers’ and leaders’ perceptions of their culture and how they think, feel, and intend to act amidst a new mandated evaluation system. As professional staff indicated some elements of the perceived culture of the organization were positive, ambivalence toward change increased. In order to change an organization, policymakers and leaders should “first examine the linkages between underlying values, organizational structures, and individual meaning” (Denison & Spreitzer, 1991, p. 2), and second re-conceptualize individual responses toward change by examining attitudes multidimensionally (Piderit, 2000).
Dedication

This work is dedicated to my husband, David; my daughter, Blake; all of the educators who influenced my journey; the students I have been privileged to teach; and the teachers I currently lead.
Acknowledgments

Twenty years ago, as I was walking through the quadrangle at Lesley College in Cambridge, Massachusetts, I envisioned attaining a doctoral degree in the field of education. My initial dedication is to Lesley, which marked a turning point that was instrumental to securing the knowledge necessary to be here now. I also want to thank every student I have ever taught and the teachers I currently lead. Continuing my education is partly for them to authentically demonstrate lifelong learning.

The Superintendent of the district kind enough to participate continuously granted all that I needed to participate in coursework attend conferences and move ahead. He checked in, asked how my dissertation was going, and gave me access to a wealth of information to complete this body of work.

Dr. Douglas White, the principal who hired me for my first public school teaching job was, and continues to be, an inspiration, a mentor, and a friend. He propelled me into leadership, supported me at a very difficult time, and cheered me on as I attained a master’s degree and studied for my doctoral degree.

The experience at Northeastern is also worth mentioning, particularly because I met Dr. Carol Sharicz. She believed in my work, and I will remember our conversations for the rest of my life. Rarely at this point in my life do I meet someone whom I consider a friend. My hope is that I will have the opportunity to communicate, and possibly work with, Dr. Sharicz even after I have completed this body of work. Although I did not spend a lot of time with Dr. David Szabla, without his theoretical framework this dissertation could not have come to fruition. Thank you, Dr. Sharicz, for being you, and thank you, Dr. Szabla, for sharing your work. Although newly appointed, my advisor, Dr. Kirchoff, has provided me the necessary assistance to realistically
contribute to scholarly research and school practice. Dr. Kirchoff pointed me in a direction that will hopefully contribute to the way public schools operate in their quest for change.

I would also like to provide a special thank you to the many who helped with editing and formatting this work. Kerri Whipple, EdD, Valerie Smith, EdD, and Editors for Students graciously helped along the way. Also thank you Dr. Cash, for providing tutoring services to assist in helping with SPSS and acknowledging my understanding, or lack of, statistics for the purpose of analyzing this study.

My husband and daughter are amazing. For the last 3 years, when not at work, I have been in front of my computer writing and researching. They have watched me and have always let me know they believed in me, even when I questioned my ability to take on this complicated endeavor. I could not have done this without them.
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Chapter 1: Introduction

American public schools are social systems that are highly complex, nonlinear, turbulent, dynamic, and multidimensional (Giacquinta, 1973; Meadows, 2008). Since the publication of A Nation at Risk: The Imperative of Education Reform (National Commission on Excellence in Education [NCEE], 1983), public schools have been the recipients of mandated changes from the U.S. Department of Education and the Department of Elementary and Secondary Education (DESE). The reform initiatives include, but are not limited to, the Education Reform Act (1993), No Child Left Behind (NCLB, 2002), and Race to the Top (2011).

Although reforms have been at the forefront of policymakers’ agendas, these initiatives have continued to fail. Roberson (2011) expressed concern about preparing American students for the 21st century, “which will bring heretofore significant changes in society, business, education, medicine, religion, etc.” (p. 885), and claimed education reform lacks the impact to change the educational system as a whole. Beer and Nohria (2006) stated that when trying to change corporate culture, “seventy percent of all change initiatives fail” (p. 14). “Reforms have become assimilated to previous patterns of schooling and have rarely replaced what is already there” (Tyack & Cuban, 1995, p. 83).

Regardless, schools have continued to attempt to implement reforms since A Nation at Risk (NCEE, 1983) was published. This research study addressed the problem associated with mandating changes in public schools without having a multidimensional understanding of stakeholders’ reactions. Once a change is introduced, it sets in motion recipients’ reaction systems (Szabla, 2006). Reaction to change is often negative due to respondents’ perceptions of the organization’s culture coupled with emotions, intentions, and thoughts.
The culture of the public school system was chosen as one construct for this study. “The relationship between culture and functioning of the social organization has been a recurring theme in the social sciences for over 50 years” (Denison & Mishra, 1995, p. 204). “Culture, meaning and significance are parts of the ‘lifeworld’ of the school” (Sergiovanni, 2000, p. 4). “Identifying shared ideals and beliefs regarding the nature and purpose of schooling is critical to establishing a purposeful community” (Marzano, Waters, & McNulty, 2005, p. 119). This study was designed to identify the perceived culture of the organization.

Organizational development researchers have encountered a “universal acceptance in organizational life that people resist change” (Dent & Goldberg, 1999, p. 25). Dent and Goldberg (1999) described the complexities of individual reaction to change and challenged the widely accepted mental model of resistance that indicates people do not resist change per se, but “may resist loss of status, loss of pay, or loss of comfort” (p. 26). However, “these are not the same as resisting change” (Dent & Goldberg, 1999, p. 26). Piderit (2000) pointed out that many studies have oversimplified human resistance to change as they often dichotomize resistance as either positive or negative.

Piderit (2000) identified ambivalence to be a hindrance to change initiatives. Szabla (2007) posited two factors contributing to change failure: (a) researchers and practitioners have not established a consistent definition of resistance, and (b) resistance has not been studied multidimensionally (p. 526). Piderit indicated the oversimplification of individuals’ reactions to change and argued, “Resistance to change advocates a view that captures more of the complexity of individuals’ reaction to proposed organizational change” (p. 783). Piderit advocated for “re-conceptualizing” (p. 783) reaction to change and instead identified ambivalence toward change as a necessary, multidimensional construct, appreciating the prevalence of ambivalence when
analyzing reaction to organizational change. Researching factors that affect human reaction may provide insight into why change fails, thereby providing leaders with information to reshape and reform initiatives in schools.

Clearly defining public schools as complex systems, or “dynamic environments for studying the multifaceted interactions” (Bowen, 1999, p. 61), and investigating the perceived culture and ambivalence that exist within school systems provided the necessary constructs and informed the methodology for this study. By connecting this research study with systems theory and utilizing the theoretical frameworks developed by Denison, Janovics, Young, and Cho (2006) and Piderit (1999), the researcher viewed mandated school change as both systemic (i.e., culture of the school) and psychological (i.e., change ambivalence). The inclusion of systemic and psychological factors in this study created multidimensional opportunities for insight into the complexities presented by human beings within public schools when faced with mandated change.

By employing a survey method to better understand the complexities involved when change becomes mandated within schools, the researcher examined employees’ perceptions of the organization’s culture system and their emotional, cognitive, and intentional reactions amidst a federally mandated performance evaluation system and captured a multidimensional view of the elements driving human reaction to planned changes. Gaining insight into the perceptions and ambivalence experienced by the employees working in a school district may help leaders better understand the level of complexity that exists within the school system and how that complexity may be connected to employees’ reactions to change. The results can inform future practice and policy when implementing change. In order to effectively understand reaction to change, it must also be understood that reaction to change is complicated:
Living successfully in a world of systems requires more of us than our ability to calculate; [that is], it requires our full humanity, our rationality, our ability to sort out truth from falsehood, our intuition, our compassion, our vision, and our morality.

(Meadows, 2008, p. 170)

Statement of the Problem

Although state and federal governments have mandated changes through the Massachusetts Education Reform Act (1993), NCLB (2002), and Race to the Top (2011), 70% of all change efforts eventually fail (Beer & Nohria, 2006; Burke, 2011). Regardless of mandates, public school systems have remained basically the same in their fundamental operations since their inception in the mid-19th century (Tyack & Cuban, 1995). This study investigated and addressed some of the underlying problems associated with change.

Even with the most comprehensive, best-planned change approaches, organizations continue to face obstacles when enacting and creating change (Cuban, 1990; Darling-Hammond, 2004; Giacquinta, 1973; Guskey, 1986; Kotter, 1995; Murphy, 2008; Pincus, 1974; Tyack & Cuban, 1995). For example, Dent and Goldberg (1999) argued, “Change efforts that automatically expect resistance to change will likely be planned and implemented less effectively” (p. 26). Further, the failure of change strategies is due to the belief that resistance is the culprit (Beer, Eisenstat, & Spector, 1990; Robertson, Roberts, & Porras, 1993; Senge, 2006).

Lack of change in a dynamic system, like public schools, may unilaterally affect the school system’s ability to teach effectively (Cuban, 1990; Darling-Hammond, 2004; Guskey, 1986). Furthermore, it appears necessary to “rethink resistance” and recognize ambivalence (Piderit, 2000), to identify the cultural perceptions (Denison et al., 2006) contributing to this
ambivalence, and to provide quantitative evidence to better articulate why change is so difficult (Giacquinta, 1973; Murphy, 2008; Pincus, 1974).

In an effort to challenge the present assumptions within the literature (Alvesson & Sandberg, 2011), this researcher investigated the problem by connecting the systemic and psychological elements (Denison et al., 2006; Piderit, 2000) as a way to indicate the relationships between organizational culture (Denison et al., 2006), change ambivalence (Piderit, 1999), and reaction to change. This insight provided a multidimensional understanding of human reaction to change (Szabla, 2006) and acknowledged the complexities and ambiguities within the system.

**Purpose of the Study**

The purpose of this dissertation research was to explore the relationship between organizational culture (Denison et al., 2006) as perceived by staff and change ambivalence (Piderit, 1999) during the implementation of a new mandated performance evaluation system in a school district in the northeast United States. Specifically, the researcher sought to uncover a plausible relationship between Denison et al.’s (2006) four factors of organizational culture (i.e., involvement, consistency, adaptability, and mission) and Piderit’s (1999) three factors of change ambivalence (i.e., emotion, cognition, and intention).

The focus of this research centered on the organizational culture system (Denison et al., 2006) and change ambivalence (Piderit, 1999). Szabla (2009) identified the individual systems present within organizations, defined them, and noted important authors for this development, which assisted in framing the constructs for this study. This study investigated the four culture traits defined by Denison et al. (2006) and three factors noted by Piderit (1999).

Ambivalence to change was measured by looking at emotional, cognitive, and intentional responses and establishing a relationship to the perceived culture system in order to deepen the
overall understanding of how a culture system within a school setting affects the human reaction to organizational change (Piderit, 2000; Szabla, 2009). Once the organizational cultural traits were defined, noted, and connected to emotion, cognition, and intention, the introduction and implementation of change initiatives may provide leaders with insight to help foster sustained change.

This researcher examined the relationships between antecedents of change and reaction to change in a northeast U.S. school district amid a newly ratified mandated change. Change remains a dominant trend in all sectors, including education, business, and government, yet organizations still struggle with sustained change efforts. Often, the change is centered on the design components rather than a consideration of the roles of human perception and reaction (Denison et al., 2006; Piderit, 2000; Szabla, 2006). The relationships between institutional forces, coupled with human perceptions and reactions, were considered as part of the change process.

In order to compete effectively in the 21st century, change is essential and inevitable. Educators must develop strategies that assist in connecting and understanding the macro systems (i.e., institutions) and the microsystems (i.e., human reaction) involved in change at all levels of the organization. The changes that are occurring in organizations today have no historical precedents: “No other period in human history could match the present one in the sheer scale, speed, and global complexity of the changes and challenges we face” (Robinson, 2009, p. 19). Regardless of the level of angst change can provoke, change is omnipresent, and a deep, quantitative level of understanding may help place change strategies in the fore, making the inevitable more comfortable for those implementing and enacting change.
Research Question

The research question derived from theory asked, “What is the relationship between change ambivalence (Piderit, 1999) and organizational culture (Denison et al., 2006) as perceived by school staff in a northeast United States school district during the implementation of a mandated performance evaluation system?” Clearly defining public schools as complex systems, or “dynamic environments for studying the multifaceted interactions” (Bowen, 1999, p. 61), while exploring school culture and change ambivalence theoretically established the necessary relationships to address the research question.

By employing a correlational survey method to better understand the complexities involved when mandated change occur within schools, the researcher examined the possibility that a relationship exists between culture systems and change ambivalence toward a federally mandated performance evaluation system. The knowledge gained as a result of this research can help leaders to better understand reaction, which in turn, can inform future practice and policy when implementing mandated changes in schools.

Conceptual Framework

The conceptual framework for this study was organized as a set of constructs and variables to investigate school personnel’s reactions to a new mandated performance evaluation system. The general constructs are: (a) organizational culture systems (Denison et al., 2006); (b) exploring ambivalence toward change by examining emotion, cognition, and intention (Piderit, 1999); and (c) looking specifically at a change (the new performance evaluation system) mandated by the DESE (2010). The overarching conceptual framework was grounded in systems theory (Banathy & Jenlink, 1996).
The independent variable was established by identifying organizational culture as a system that permeates the environment. Denison et al. (2006) identified specific areas to measure organizational culture systems and developed a validated survey to identify the perceived culture of the organization.

The dependent variables included three dimensions of ambivalence toward change as defined by the tripartite model of attitudes: emotion, cognition, and intention (Piderit, 1999). The identified constructs provide a multidimensional, interdependent understanding of the complexities of reaction to a planned, top-down organizational change (see Figure 1).

![Conceptual framework overview grounded in systems theory.](image)

**Figure 1.** Conceptual framework overview grounded in systems theory.

This research was grounded in a systems theory approach. Systems theory, the Human Reaction and Action System (Szabla, 2009), organizational culture (Denison et al., 2006), and change ambivalence (Piderit, 1999) consider the macro and micro factors necessary to address the complexity surrounding the human response to organizational change (Chinn & Benne, 1961; Dent & Goldberg, 1999; Katz & Kahn, 1966; Schein, 1985; Szabla, 2009).
Systems inquiry (Banathy & Jenlink, 1996), organizational culture (Denison et al., 2006), and change ambivalence (Piderit, 1999; Szabla, 2006) were the constructs the researcher implemented to design this study. “Systems inquiry and its application in education is liberating and renewing, which recognizes the import of valuing, nurturing, and sustaining the human capacity for applying a new intellectual technology in the design of human activity systems like education” (Banathy & Jenlink, 1996, p. 53). The response system includes three distinct processes—cognition, emotion, and intention—that generate individuals’ attitudes toward change (Piderit, 1999; Szabla, 2009). Connecting systems inquiry with the organizational culture and change ambivalence assisted in conceptualizing the problem of practice, informed the research question, and defined the methodology.

Looking at the research from a systems theorist perspective permitted an interdisciplinary exploration of the many constructs forming a general phenomenon (i.e., change ambivalence and organizational culture), arranging a hierarchy of complexity within an organization’s individual behavior, and developing a level of abstraction appropriate to explain the phenomena (K. E. Boulding, 1956). For the purpose of this research, systems theory granted the researcher the ability to identify individual behaviors, actions, or changes and relate these factors to the environment (K. E. Boulding, 1956).

The method proposed by systems theory is to model complex entities created by multiple interactions of components by abstracting from certain details of structure and component, and concentrates on the dynamics that define the characteristic function, properties, and relationships that are internal or external to the system. (Laszlo & Krippner, 1998, p. 2)

In order to effectively respond to the covert intricacies of organizations, it is imperative to understand the behavior contingent on the social field of forces, the interconnection of groups,
and the behavior patterns that “crisscross” and cycle within the subsystems (Katz & Kahn, 1966). The seminal work by Katz and Kahn (1966) provided an overview of four theoretical concepts that have “paved the way” for open systems theory (see Table 1).

Table 1

*Overview of Systems Theoretical Concepts*

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<th>Theory</th>
<th>Definition</th>
<th>Strength</th>
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<td>Marxian</td>
<td>Social relations of production</td>
<td>Related structural analysis to the human beings within the system</td>
<td>Tied too specifically to certain functions and concentrated too much on social dynamics</td>
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<td>Parsons and the structural functionalists (1951)</td>
<td>Examined social structures from the point of view of the functions they served</td>
<td>Developed subsystems and acknowledged their interrelationships</td>
<td>Establishment-oriented; unable to deal with change</td>
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<td>Allportian (1954) event-structure theory</td>
<td>Conceptualized social structure as a cycle of events that return and cycle again</td>
<td>Social systems are contrived, need to identify patterns of social behavior, continued examination of structure and interacting events</td>
<td>No definitive assumptions regarding change</td>
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<td>General systems approach</td>
<td>Embraced all levels of science from the study of a single cell to study of society</td>
<td>Openness to every system (open systems theory, really)</td>
<td>Closed, dominated by natural scientists; if practiced in this way, analogical thinking will be replaced by higher levels of phenomena</td>
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Like the ideology of systems theory, the ideology of social systems theory can be utilized to assist in explaining the life of organizations and the necessary considerations when addressing the complexities of school life (Banathy & Jenlink, 1996; Bowen, 1999; Jenlink, 1995; Jenlink & Banathy, 2002; Whitchurch & Constantine, 1993) and systems thinking (Senge, 2006; Sweeny &

A systems view of public education enabled the researcher to “explore, understand and describe” (Banathy & Jenlink, 1996, p. 47) the complexities of school life while change is emerging. Banathy and Jenlink (1996) proposed this “new way of thinking enables us to explore” (p. 47): (a) characteristics embedded within interconnected levels; (b) relationships and interdependencies within the system; (c) energy transmitted between the system and environment; (d) purpose, goals, and boundaries of the system and society; (e) interactions, relationships, and patterns connected within the system; (f) “properties of wholeness and the characteristics that emerge” at various system levels; and (g) “behavior of schools as living systems, and manifestations of changes over time” (p. 47).

Social systems are open systems that consider taking information from the environment, having the capacity to learn and change (Miller, 1978). The system and the environment are interconnected and interdependent. Changes in one area lead to unpredicted changes in other areas (Reigeluth, 2004).

Szabla (2007) “explored the relationship between change leadership strategy and responses to change along cognitive, emotional and intentional dimensions, capturing a multifaceted view of resistance to organizational change” (p. 554). His work, in part, informed this research. The researcher investigated the culture system within a school district and identified the emotions, thoughts, and intentions of participants to determine the interconnected
relationships existing between the variables as the school district was in the process of implementing a new mandated performance evaluation system.

**Research Paradigm (Postpositive)**

This study applied a positivist paradigm maintaining the traditional form and assumptions related to quantitative research design (Creswell, 2009). In order to collect data that indicated causality, the researcher identified and assessed the causes (Creswell, 2009). This study was designed to determine what constructs within schools affect reaction to change. Szabla’s (2009) theoretical framework provided a reductionist view (i.e., reduced ideas into a small set of constructs to test). One of Szabla’s constructs led to the exploration of culture and identified Denison et al.’s (2006) Organizational Culture Survey, naming the independent variable.

The dependent variables for this study considered the human reaction toward change using Piderit’s (1999) Change Ambivalence Scale. These variables were chosen to numerically measure the emotions, cognitions, and intentions of individuals’ reality that exists within the school system (Creswell, 2009).

This research began with a conceptual framework. Data were collected through a correlational survey method to allow for a better understanding of the systems present within schools and their relationship to human reaction to change. The postpositive worldview incorporated in this study provided evidence that may shape future knowledge about organizational change. Further, the deductive reasoning approach enabled empirical inferences to be made by mitigating the bias often found in qualitative research (Creswell, 2009).

**Potential Significance of Study**

In the midst of a newly mandated performance evaluation system, organizational culture and change ambivalence are considered “the evolution of employee reaction to change” (Piderit,
School change is unlikely (Beer & Nohria, 2006; Cuban, 1984; Roberson, 2011; Tyack & Tobin, 1994) and it is important to consider the number of factors within school systems that can help explain why change is often difficult. The independent variable for this dissertation, organizational culture systems (Denison et al., 2006), was influenced by the research of Szabla (2009) and the five inner contextual factors he identified, as well as Denison et al.’s (2006) organizational factors. The dependent variable, originated by Piderit’s (1999) research, considered emotional, cognitive, and intentional reactions to change.

Culture systems can be explained through observing particular behavioral regularities driven by the organization’s core values, beliefs, norms, and ideologies (Schein, 1990). Culture systems steer employees’ emotional, cognitive, and intentional reactions to change (Bartunek, 1984; Denison et al., 2006; Draft & Weick, 1984; Schein, 1985; Smircich, 1983; Szabla, 2009). For example, Burke (2008) stated, “You don’t change culture by trying to change culture. Culture is ‘the way we do things around here’ and includes deeply held beliefs, attitudes and values” (p. 23).

Social systems can be identified by the roles and expectations of each member of the organization (Parsons, 1951; Szabla, 2009). Each role is precise, is reinforced by the members of the organization, and plays a role in how employees feel, think, and act (Katz & Kahn, 1966; Szabla, 2009). When changing the system, it is important to consider “the individuals that comprise the social system, i.e., education, are the primary beneficiaries and users of the system” (Banathy & Jenlink, 1996, p. 50).

Trait systems are revealed through repeated patterns of emotions, thoughts, and intentions (Szabla, 2009). Oreg (2003) noted employees have distinct personality traits when faced with change. Those individual traits either demonstrate support for or resistance to change (Szabla,
2009). Piderit (2000) developed a tripartite theory of attitudes and created a reaction-to-organizational-change scale. This scale was used to measure the dependent variable in this research study.

In order to improve, change, reform, and transform public schools, Elmore (2000) stated:

It will require changes in the values and norms that shape how teachers and principals think about the purposes of their work, changes in how we think about who leaders are, where they are, and what they do, and changes in the knowledge and skill requirements of work in schools. In short, we must fundamentally re-design schools as places where both adults and young people learn. (p. 35)

This researcher examined why change in schools is difficult from a multidimensional perspective, gathering data to assist in better understanding those affected by change. Understanding prior research, practices, and policies as well as incorporating methodology that addresses the complexities of school life assisted in gathering data to inform future research studies. Examining organizational culture (Denison et al., 2006), change ambivalence (Piderit, 1999), and three of the five inner contextual factors identified by Szabla (2009) was necessary to adequately define the systems within schools.

**Significance to policy.** The United States has been actively engaged in reform efforts for the last 20 or more years. In response to *A Nation at Risk* (NCEE, 1983), reforms have intensified. According to Desimone (2002), separate reform “waves” (p. 433) have been instituted. Those have included: (a) systemic reform (increase curriculum standards and regulations, increase teacher pay) relying on “top-down approaches” (p. 433); and (b) change focused on developing strategies to strengthen the relationships between school and home,
teacher professional development, and strengthening support for special student groups (Desimone, 2002). Despite these reforms, schools have not changed much (Tyack & Tobin, 1994). The third “wave” of reform, “comprehensive school wide reform” (Desimone, 2002, p. 434), identifies specific criteria of successful schools. These include shared goals, site-based management, strong leadership, professional development, parental involvement, and positive school climate (Edmonds, 1979, 1981; Fullan & Stieglbauer, 1991; Purkey & Smith, 1983).

McLaughlin (1987) noted a number of important lessons when examining policy implementation. Policy cannot always mandate what matters. Individual incentives and beliefs are central to local responses (McLaughlin, 1987). Effective implementation requires a strategic balance of pressure and support, and integrating the macro world of policymakers into the micro world of individual implementers is essential (McLaughlin, 1987). Schools are multidimensional, complex, social systems; therefore, policy must address the relationship between what is intended by the implementation of the policy and how these intentions are perceived and then practiced.

Desimone (2002) reviewed the literature through the lens of policy attribute theory as it relates to comprehensive school reform and concluded, “the attributes to a large extent depend on each other” (p. 470) and “all five policy attributes contribute to implementation; in particular, specificity is related to implementation fidelity, power to immediate implementation effects, and consistency, authority, and stability to long-lasting change” (p. 473).

Generally, most policies do not consider the individual system they are meant to change (McLaughlin, 1987). In this investigation, the researcher provided empirical evidence that identified the school’s culture. Connecting the culture to educators’ emotional, cognitive, and intentional reactions to a federal mandated performance evaluation system providing insight into
the development and redevelopment of future policies.

**Significance to practice.** Clark and Guba (1965) wrote a paper directly related to the change process and subsequent practices in education. This paper was a response to Clark and Guba’s frustration with the vast number of research articles “collecting dust on library shelves instead of influencing school practice” (p. 1). They also indicated “researchers are being castigated for not tackling real problems as practitioners are guilty for not using research to inform their decisions” (Clark & Guba, 1965, p. 1). Although noted almost 50 years ago, this researcher believes this is still true today.

This research also addressed the multidimensional factors affecting human reactions to change in order to provide empirical evidence about what appears to obstruct change in public schools. Change practices will need to be reformed in order to accommodate those constructs affecting reaction to change. Mandated changes, the perception of those changes by the employees, and the lack of change are real problems. The quantitative findings provided empirical evidence for teachers and leaders to set in motion practices that consider multidimensional factors, unlocking the door toward openness to change.

Massachusetts accepted money from the Race to the Top grant; therefore, the state is required to create and implement a new and approved evaluation process for administrators and teachers. The DESE Regulation 603 CMR 35.00 states:

The purpose of 603 CMR 35.00 is to ensure that every school committee has a system to enhance the professionalism and accountability of teachers and administrators that will enable them to assist all students to perform at high levels. 603 CMR 35.00 sets out the principles of evaluation for Massachusetts public schools and districts. 603 CMR 35.00 requires that school committees establish a rigorous and comprehensive evaluation
process for teachers and administrators, consistent with these principles, to assure effective teaching and administrative leadership in the Commonwealth’s public schools.

(DESE, 2010, p. 12)

This change is required for all public schools in Massachusetts that have applied for and received money from the Race to the Top grant. Teacher and leader practices will have to change to adhere to the mandate.

**Significance to research.** Inspired by the research of Szabla (2006, 2009), Piderit (1999, 2000), Denison and Spreitzer (1991), Denison et al. (2006), and Denison and Mishra (1995), this study provides quantitative results to inform future studies, exposing the factors that have impeded progress. Multidimensional, empirical, and quantitative results indicating the emotional, cognitive, and intentional factors affecting individuals’ experience of a mandated change, while considering the already present culture system, will contribute to the field of educational research by allowing for a deeper understanding of the effects of the change process. Giacquinta (1973) suggested:

> The absence of critical attention to the methodological and statistical procedures used . . . reflects this emphasis on precipitating change rather than studying it. The extension of knowledge about organizational change will require empirical studies of greater theoretical, methodological, and statistical sophistication. (pp. 178-179)

**Methods Summary**

A quantitative, correlational survey design addressed the research question. A closed-ended survey employing Likert-type scaling was used to collect data from a convenient sample of professional school personnel. The independent variable was measured with a survey developed by Denison et al. (2006). The dependent variable was measured using Piderit’s (1999)
Change Ambivalence Scale. This research explored the relationship between organizational culture (Denison et al., 2006) and change ambivalence (Piderit, 1999) as perceived by staff during the implementation of a mandated performance evaluation system in a school district in the northeast United States. Specifically, the researcher sought to uncover any relationship between Piderit’s three factors of change ambivalence (i.e., cognition, intention, and emotion) and Denison et al.’s four factors of organizational culture (i.e., involvement, consistency, adaptability, and mission). It is estimated that every organization undergoes some form of change effort every 3 to 7 years, costing organizations thousands of dollars; yet 70% of all change efforts eventually fail (Burke, 2011).

The aim of the research was to determine employees’ perceptions of culture and their ambivalence toward a mandated change (Babbie, 1990). Cross-sectional research was chosen in order to observe all of a particular population at a designated point in time. Cross-sectional research is defined as “research in which you observe what naturally goes on in the world without directly interfering with it. This term specifically implies that data come from people at different age points with different people representing each age point” (Field, 2011, p. 784). Correlational research is similar in that observation takes place without interference. Correlational research implies “data will be analyzed so as to look at relationships between naturally-occurring variables rather than making statements about cause and effect” (Field, 2011, p. 783). The researcher collected data from professional staff and leaders within a chosen site (Fraenkel & Wallen, 2009). The survey was intended to produce “quantitative or numerical descriptions about some aspect of the study population” (Fowler, 2009, p. 1).
Limitations

One primary limitation of the study was all members of the population asked to participate might not have had Internet access to complete the web-based survey; therefore, technology could have been a limitation (Gjestland, 1996). Also, security and data integrity could be problematic. Participants may have been suspicious of online surveys, which could have influenced the number of respondents (Smith, 1997). Technical issues may also have arisen when respondents were answering survey questions, creating a level of frustration for those asked; therefore, responses may have been limited (Dillman et al., 2009).

Nonresponse, failure to return the survey, or returning an incomplete survey (Fraenkel & Wallen, 2009) were considered as possible limitations. The survey instrument was provided to public school professional staff and school leaders in a small northeast U.S. school district; therefore, the data are only applicable to those within the chosen public school and not transferable to other organizations or other states. The mandated performance evaluation system is new, and respondents may only understand the process in theory instead of in practice; therefore, respondents may have only indicated responses in terms of their predictions rather than their experience.

Definition of Terms

For the purposes of this study, the following definitions were established for clarity and understanding:

- **Adaptability**: Adaptable organizations translate the demands of the organizational environment into action (Denison et al., 2006, p. 7).
- **Agreement**: “Members of the organization are able to reach agreement on critical issues. This includes both the underlying level of agreement and the ability to
reconcile differences when they occur” (Denison et al., 2006, p. 7).

- **Capability development**: “The organization continually invests in the development of employees’ skills in order to stay competitive and meet on-going business needs” (Denison et al., 2006, p. 6).

- **Change ambivalence**: “Responses to a change initiated that are neither consistently negative nor consistently positive” (Piderit, 2000, p. 783).

- **Cognitive reaction**: “A cognitive response to a change includes an individual’s beliefs, which express positive or negative evaluation of the change” (Eagly & Chaiken, 1998). The cognitive response subscale of Piderit’s Change Ambivalence Scale was used to capture this data (Szabla, 2006, pp. 43-44).

- **Consistency**: “Consistent organizations develop a mindset and create organizational systems that build an internal system of governance based on consensual support” (Denison et al., 2006, p. 7).

- **Coordination and integration**: “Different functions and units of the organization are able to work together well to achieve common goals. Organizational boundaries do not interfere with getting work done” (Denison et al., 2006, p. 7).

- **Core values**: “Members of the organization share a set of values which create a sense of identity and a clear set of expectations” (Denison et al., 2006, p. 7).

- **Creating change**: “The organization is able to create adaptive ways to meet changing needs. It is able to read the business environment, react quickly to current trends, and anticipate future changes” (Denison et al., 2006, p. 8).

- **Culture systems**: Observed behavioral regularities, group norms, and values (Schein, 1985). Culture affects how individuals respond to change. When human beings
respond, they consider the meanings, beliefs, and frames of reference embedded in the culture to interpret the change and the values they will call upon to react (Bartunek, 1984; Daft & Weick, 1984; Denison et al., 2006; Schein, 1990). An organization’s ideology, norms and rituals, language, and symbols (Smircich, 1983) steer what emotions, beliefs, intentions, and behaviors are generated in a response system (Szabla, 2009).

- **Customer focus:** “The organization understands and reacts to their customers and anticipates their future needs. It reflects the degree to which the organization is driven by a concern to satisfy their customers” (Denison et al., 2006, p. 8).

- **Emotional reaction:** Eagly and Chaiken (1998) defined an emotional response as “sympathetic nervous system activity that people have experienced in relation to an attitude, object and subsequently associate with it” (p. 272). “Emotions are a key element of the change process” (Szabla, 2009, p. 8).

- **Empowerment:** “Individuals have the authority, initiative, and ability to manage their own work. This creates a sense of ownership and responsibility toward the organization” (Denison et al., 2006, p. 6).

- **Goals and objectives:** “A clear set of goals and objectives can be linked to the mission, vision, and strategy, and provide everyone with a clear direction in their work” (Denison et al., 2006, p. 8).

- **Intentional reaction:** An intentional response to a change comprises an individual’s plan to take action relative to the change (Bagozzi, 1992).

- **Involvement:** “Organizational members are committed to their work, and feel a strong sense of ownership . . . have at least some input into decisions that will affect their
work and feel that their work is directly connected to the goals of the organization” (Denison et al., 2006, p. 6)

- **Mission**: “A mission provides purpose and meaning by defining a social role and external goals for the organization . . . A sense of mission allows an organization to shape current behavior by envisioning a desired future state” (Denison et al., 2006, p. 8).

- **Organizational learning**: “The organization receives, translates, and interprets signals from the environment into opportunities for encouraging innovation, gaining knowledge, and developing capabilities” (Denison et al., 2006, p. 8).

- **Perception**: An individual’s unique interpretation of his or her reality. “Readiness for organizational change reflects an individual’s unique interpretive reality of the organization” (Eby, Adams, Russell, & Gaby, 2000, p. 422).

- **Planned organizational change**: Planned organizational change is a purposefully generated response triggered by an environmental shift sensed by the organization (Porras & Silvers, 1991).

- **Resistance to change**: A negative response to a planned organizational change indicated by low scores along the cognitive, emotional, and intentional dimensions (Piderit, 2000; Szabla, 2006).

- **Respondents**: Respondents were defined as those individuals who react to and are responsible for enacting an organizational change (Szabla, 2006).

- **Strategic direction and intent**: “Clear strategic intentions convey the organization’s purpose and make it clear how everyone can contribute and ‘make their mark’ on the industry” (Denison et al., 2006, p. 8).
• **Team orientation**: “Value is placed on working cooperatively toward common goals for which all employees feel mutually accountable. The organization relies on team effort to get work done” (Denison et al., 2006, p. 6).

• **Vision**: “The organization has a shared view of a desired future state. It embodies core values and captures the hearts and minds of the organization’s people, while providing guidance and direction” (Denison et al., 2006, pp. 8-9).

**Summary**

To adhere to the mandated DESE teacher/administrator performance evaluation process, Massachusetts school districts will need to consider the culture system currently in place and respondents’ emotional, cognitive, and intentions to act as the process of change is unveiled and implemented. It is also important to understand that systems can be both open and closed. Social systems theory proposes that systems are open to the external environment, yet closed due to the nature of the culture system (Kirchoff, personal communication, May 9, 2013). For example, public schools in the United States are social systems that have been manufactured to self-replicate. This is demonstrated by the behavioral regularities, group norms, and values (Schein, 1985) established within the system.

This study of the macro systems and micro reactions assisted in obtaining quantitative data to inform practices and procedures that foster sustained change. Providing insight into how organizational change phenomena interact at different levels may capture the complexities associated with this mandated change and impart meaning for both researcher and practitioner (House, Rousseau, & Thomas-Hunt, 1995).
Chapter 2: Literature Review

The literature review contains an overview of organizational change, school change, and resistance to change, while identifying schools as complex systems. The researcher analyzed and examined the cultural, social, and trait systems that exist within organizations, and how those systems may or may not affect reaction to change. Perceptions and ambivalence of those asked to implement change were also examined in the current as well as historic literature. Notions of these concepts have evolved over time, linking perception and ambivalence to action and inertia. Finally, the dimensions of emotion, cognition, and intention relative to perception and ambivalence toward change were presented as school personnel were beginning to experience a newly mandated performance evaluation system.

In order to convey the concerns the researcher had as a practitioner within a public school system, literature was analyzed addressing the elements within the system. According to Alvesson and Sandberg (2011), rather than filling the gaps within the current literature, their idea of problematization (p. 248) was the methodology used to examine the existing literature for this research. The researcher problematized “assumptions that underlie existing literature as a way to construct research questions” (Alvesson & Sandberg, 2011, p. 248) and challenged “the literatures underlying assumptions in any significant way” (p. 249). This process allowed the researcher to (a) move beyond “gap-spotting” (Alvesson & Sandberg, 2011, p. 266) in the existing literature; and (b) “through a dialectic interrogation of our own [the researcher] familiar position, other theoretical stances” (p. 267), were identified, articulated, and challenged assumptions underlying current literature (Alvesson & Sandberg, 2011). Figure 2 indicates the problematization process developed by Dutton, Dukerich, and Harquail (1994) and identified by Alvesson and Sandberg (2011).
The Problematization Methodology and Its Key Elements

**Aim of the problematization methodology**
- Generating novel research questions through a dialectical interrogation of one’s own familiar position, other stances, and the literature domain targeted for assumption challenging

**A typology of assumptions open for problematization**

<table>
<thead>
<tr>
<th>In-House</th>
<th>Root Metaphor</th>
<th>Paradigm</th>
<th>Ideology</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>The condition of public school culture affects change, resistance impedes change, change has been implemented prior to multidimensional, quantitative analysis</td>
<td>Systems theory related to public schools, social systems, ambivalence, perception</td>
<td>Education research employs a greater number of qualitative studies, leaving ambiguity in understanding of real problems when change or lack thereof occurs</td>
<td>Political agendas dictate mandated changes</td>
<td>Researchers indicate that culture is a key indicator when considering reaction to change</td>
</tr>
</tbody>
</table>

**Principles for identifying and challenging assumptions**

| 1. Identify a domain of literature: Organizational change, school change, resistance to change, ambivalence, perception, culture, social, trait, | 2. Identify and articulate assumptions: Resistance causes stagnation, culture is a determining factor in success of change, ambivalence needs to be considered, quantitative studies are necessary, | 3. Evaluate articulated assumptions: The assumptions need to be challenged multidimensionally, therefore considering all variables quantitatively | 4. Develop alternative assumptions: Consider connecting culture with cognition, intention and emotion | 5. Relate assumptions to audience: Professional staff in public schools are the change agents, therefore they need to be the respondents of this study | 6. Evaluate alternative assumptions: Depending upon the outcome of the study, will determine if culture and ambivalence are positively correlated |

*Figure 2. Process of literature review.*

Culture systems have been viewed as a distinct construct defined by others’ perceptions. Defining and examining the independent variables (i.e., the institution / macro system), dependent variable (i.e., human reaction / micro systems), and their interconnected relationships grounded this research in the literature pertaining to the problem of practice. This research focused on a number of variables with the purpose of finding a statistical representation of the systemic and psychological effects of change within a public school district. In order to accomplish this task, the macro and micro levels that influence change were considered from a multidimensional perspective. Within each of the macro systems (culture), humans’ react (the micro level) and are asked to take action toward change.
Often the emphasis is on the design of the change; less often is there consideration of the role of human perception and reaction (Szabla, 2009). The dynamics and perceptions of institutional forces—such as culture, social, and trait systems within organizations—and individuals’ emotional, cognitive, and intentional reactions to these changes are complex. As a result of this research, there may be a need to conduct future surveys addressing the macro systems and micro reactions to learn more about the effects of change and how this knowledge can enhance future research, policy, and practice, informing change strategies prior to implementing change initiatives.

Organizational Change

Organizational change research is available in various fields to develop scientific knowledge while contributing to practice and policymaking (Pettigrew, Woodman, & Cameron, 2001). Similarly, mandates in education and bureaucratic structures require change. Yet, those changes are “not based on careful testing of hypotheses, but on a blend of evidence and speculation, and are aimed at influencing how one might think about educational research and development” (Pincus, 1974, p. 113).

Armenakis and Bedeian (1999) examined organizational change literature over a 9-year period and focused their examination on four themes: (a) content issues, (b) contextual issues, (c) process issues, and (d) criterion issues. Four observations were noted in this work: (a) organizational change studies have focused on a single set of constructs and have not considered multidimensional analysis; (b) change analysis should consider a longitudinal view to better understand all of the complexities that arise when change is introduced; (c) additional studies regarding the behavior and attitudes of those responsible for enacting the change should be
considered, allowing for procedures for implementing and planning change; and (d) there is a need to determine effective behaviors and the readiness of respondents to change.

Burke (2008) noted changing the culture of an organization is extremely difficult. “Most efforts by executives, managers and administrators to significantly change the organization they lead do not work” (Burke, 2008, p. 11). Moreover, when an organization is working well, it is difficult to justify why change is necessary (Burke, 2008). In an article reporting the underlying assumptions, theories, and metaphors used to describe healthcare systems and how knowledge is transferred into practice, Kitson (2008) reported integrating systems theory with knowledge translation theory could speed up change practices. She proposed knowledge translation theory, a linear endeavor metaphorically viewing the system as a machine, is not enough to improve practice. Embracing systems theory as a way to acknowledge “the complex, dynamic nature” (Kitson, 2008, p. 225) of the system appears more appropriate.

In addition to systems theory, theories of innovation and learning organization theory, the development of critical social science theories has moved our thinking from the linear, objective view of the world to a view that is much more conditional, contextual and relational in nature. (Kitson, 2008, p. 224)

Weick and Quinn (1999) noted many change models have roots in Lewin’s three-phase conceptualization of change. Lewin’s (1952) conceptualization includes unfreezing, moving, and refreezing. Resistance to change, justice, and commitment are concepts that appear in many change models. In Lewin’s terms, resistance to change is typically included as part of the unfreezing phase, justice is typically a component of the unfreezing or moving phase, and commitment is typically a component of the refreezing phase. In Lewin’s field theory, behavior is conceptualized as the interaction between a person and the environment. The forces within the
field are psychological in nature; because they differ, tension is created. Some forces act to maintain the status quo and others promote change. Lewin indicated that when the forces are equal, the force field is quasi stationary, and when the equilibrium is interrupted, change from the status quo takes place. On an individual level, the field is considered an individual’s life space. This concept also applies at other levels, such as in groups and organizations.

The use of the term resistance to change first gained popularity following the study conducted by Coch and French (1948) and again in the 1950s and 1960s following Lewin’s (1952) work on field theory. Since that time, resistance to change has been generally accepted as a part of the change process and is included in many texts on organizational development, management, and organizational behavior. Recently, however, some have highlighted many other accepted ideas about resistance and the relationship to change (Dent & Goldberg, 1999; Ford, Ford, & D’Amelio, 2008; Oreg, 2003; Piderit, 2000).

**School Change**

Before investigating the variables, the researcher created an overview of federal- and state-mandated changes in schools over time (see Table 2).
Table 2

Federal and State Mandates Overview

<table>
<thead>
<tr>
<th>Year</th>
<th>Mandate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td><em>U.S. Supreme Court Brown v. Board of Education.</em></td>
</tr>
<tr>
<td>1958</td>
<td>Sputnik causes increased funding for scientific research and science education.</td>
</tr>
<tr>
<td>1965</td>
<td>The Elementary and Secondary Education Act is passed as part of Lyndon Johnson’s War on Poverty.</td>
</tr>
<tr>
<td>1974</td>
<td>The Equal Education Opportunity Act is passed. It prohibits discrimination and requires schools to take action to overcome barriers that prevent equal protection.</td>
</tr>
<tr>
<td>1993</td>
<td>The Massachusetts Education Reform Act requires a common curriculum and statewide tests.</td>
</tr>
<tr>
<td>2001</td>
<td>The controversial No Child Left Behind Act is approved by Congress and is signed into law on January 8, 2002.</td>
</tr>
<tr>
<td>2009</td>
<td>The American Reinvestment and Recovery Act provides $90 billion for education and includes Race to the Top, a $4.35 billion program designed to induce reform in K-12 education.</td>
</tr>
<tr>
<td>2010</td>
<td>Race to the Top and The Common Core State Standards initiative, a statewide effort to nationalize state standards, is implemented in Massachusetts.</td>
</tr>
</tbody>
</table>

Setting a broad concept of the study situated existing literature in a broader scholarly and historical context (Boote & Beile, 2005). Three federally imposed initiatives have had a great effect upon American public schools. The focus of this research was a school district in the northeast United States. For example, in Massachusetts, the U.S. federal government initially stipulated the mandates, and the DESE communicated those mandates to school districts.

Within the last 30 years, the U.S. federal government has created significant publications and mandates that have led to policy changes within the DESE. It is not clear, however, whether those policy changes have trickled down to influence individual school practices throughout the state. After *A Nation at Risk* (NCEE, 1983) was published, a government-commissioned analysis
of American public education during the Reagan administration began. “American education has been in a perpetual state of rolling crisis and reform” (Hewitt, 2008, p. 575). The bipartisan NCLB (2002) was signed into law by Congress in 2002, and perpetuated standards-based reform. The law mandated high-stakes student testing, held schools accountable for student achievement, and imposed penalties on schools that did not meet the requirements, holding steadfast to the idea that all students living in America and attending public schools would reach proficiency on each subsequent state exam by 2014.

Although NCLB (2002) was a monumental endeavor, the federal government was not able to provide the money necessary to adhere to and maintain the priorities of the Act. President Obama’s American Recovery and Reinvestment Act, which provided a $4.35 billion investment in Race to the Top (2011), a grant awarded to schools that have demonstrated success in student achievement, has replaced NCLB.

The state of Massachusetts began to change education policies in 1993 by passing the Massachusetts Education Reform Act, instituting statewide testing and standardized curriculum. Testing began in 1998, and curriculum standards were written in all major subject areas. All schools needed to begin to look at what they were teaching and how they met the standards, as determined by student scores on mandated tests. This action was a result of the publication of A Nation at Risk (NCEE, 1983).

We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur—others are
matching and surpassing our educational attainments. If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems that helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament. (NCEE, 1983, p. 9)

Hunt and Staton (1996) performed an extensive review of the literature regarding *A Nation at Risk* and surmised this document was “perhaps the most widely read education reform report in history” and “the catalyst for the recent education reform movement” (p. 289). As a result of the report, the federal government became more dedicated to having control over the states and the curriculum being taught within public schools (Hewitt, 2008). NCLB (2002), which renamed and reauthorized the Elementary and Secondary Education Act of 1965, demanded an increase in the quality of America’s public schools as determined by yearly assessments of student progress (Rentschler, 2005). Because money was allocated to states by the federal government, the states in turn, provided funding to schools, allowing more control of underperforming district schools. Each state was responsible for creating yearly assessments, which caused large-scale discrepancies in the level of standards and assessments defined as proficient. NCLB—although not inclusive of the needs of all students because it determines success by one narrow measure (Elmore, 2000; Rentschler, 2005; Robinson, 2009)—has brought forth changes in public schools. Schools are held accountable, and many states have determined creating standards and testing all students is a graduation requirement.
In 2008, President Obama was elected and there was indication that substantial changes would be made to NCLB. In 2010, he signed the American Reinvestment and Recovery Act, which included Race to the Top, a grant awarded to states that applied. Massachusetts was awarded $250 million and accepted the Common Core Standards, changing its previous standards. The state is now required to institute a new teacher/administrator evaluation process. Onosko (2011) stated President Obama’s Race to the Top reform agenda is “profoundly” flawed (p. 1). The agenda, which dictates higher-stakes student testing, increases standardization and centralization, which “is not in the best interest of our nation and our nation’s children” (p. 1). Race to the Top once again imposed change upon public schools without a multidimensional understanding of human reaction.

As a result of the turnaround phenomenon, state mandates, student testing, and mandated evaluation implemented in public schools, there are few empirical data points to guide schools and policymakers. Moreover, there is misunderstanding and confusion about the meaning of the components of organizational change, although there is no shortage of ideas about ways to turn around failing schools (Murphy, 2008). Solutions are created in response to failures with little analysis of the variables or conditions that affect change (Murphy, 2008).

The literature associated with school change is significant, yet not necessarily empirical (Clark & Guba, 1965; Giacquinta, 1973). However, notable studies have analyzed why change is so difficult in public schools. As far back as 1965, following the passing of the Elementary and Secondary Education Act, researchers (e.g., Carlson, 1965; Clark & Guba, 1965; Newmann & Wehlage, 1995; Tyack & Cuban, 1995) began discussing school change. Clark and Guba (1965) stated, “Various processes and functions in the change process have been oversimplified” (p. 3). Carlson (1965) posited three factors influencing slow school change: (a) lack of a professional
innovator or change agent, (b) inadequate research, and (c) schools’ status as an indispensable service showing little need to or interest in change. “The past quarter century leaves little doubt that public schools are extraordinarily resistant to change” (Wilms, 2003, p. 606).

Newmann and Wehlage (1995) offered a longitudinal study of school restructuring, providing four case studies of eight schools in four communities and synthesizing research findings from 1990 to 1995. They stated, “Our studies of school restructuring indicate that while each of these reforms have some potential to advance student learning, none of them, either alone or in combination, offers a sure remedy” (p. 1). School reform is a prime arena for debating the shape of the future. “Such a debate is a broad civic and moral enterprise in which all citizens are stakeholders” (Tyack & Cuban, 1995, p. 136). Public schools are, in fact, systems in which multifaceted interactions take place (Bowen, 1999). Within these systems, the interconnectedness is evident, and the inner contextual factors (i.e., culture systems) affect reaction (i.e., cognitive, emotional, and intentional) to change.

Caine (2004) asserted, “human beings are systems of some sort” (p. 4) because there is interconnectedness between reactions and interactions that are nonlinear. “Learning, creativity, decision making, emotional and social intelligence and several other capacities and processes are actually functions and properties of the system as a whole” (Caine, 2004, p. 8). A review of the seemingly endless articles about change, as well as response and resistance to change, demonstrates the need for more research. Understanding dynamic reactions, evaluating current policies, and deciding how policies are created and implemented to adhere to mandates requires a multidimensional perspective, keeping in mind what is in the best interest of the people within the school.
There exists a “lack of discipline of explicit model creation and simulation” (Forrester, 1994, p. 1); therefore, leaders “rely on subjective use of unreliable intuition for evaluating the complex structures that emerge from the initial description of the real system” (p. 1). Eliciting information from those working in public schools should contribute insight, rigor, and clarity to better understand systems theory and the relationship between the theory, theoretical framework, and change process (Forrester, 1994).

In 1995, Denison and Mishra wrote an article that identified four traits that link directly to organizational development and organizational culture (i.e., involvement, consistency, adaptability, and mission). After sampling 764 organizations, “the results show support for the predictive value of traits, and help to illustrate the complimentary of qualitative and quantitative methods for studying organizational culture” (Denison & Mishra, 1995, p. 204). This researcher chose to use the measure developed by Denison et al. (2006) to explore the relationship between school change ambivalence and culture utilizing quantitative measures.

**Resistance to Change**

Coch and French (1948) conducted research at Harwood Manufacturing Company and found resistance to change was less likely to occur when managers enlisted employees’ participation in decisions. In their classic study, they examined the question of why people resist change so strongly. In order to measure resistance to change, they conceptualized resistance as a dichotomous behavioral variable. Desirable/compliant behaviors were interpreted to include three components: (a) emotional (affective), (b) intentional (behavioral), and (c) cognitive (thought). This perspective allowed for a more complete understanding of how employees respond to change from a multidimensional perspective. For example, an individual might desire to act in accordance with a change effort but might also feel the change conflicts with his or her
ethics or knowledge of day-to-day work. The result of these mixed feelings is what Piderit (2000) referred to as ambivalence.

The study prompted further investigation into the idea that resistance is responsible for lack of change. Dent and Goldberg (1999) traced the ascendance of this mental model to show resistance to change is not necessarily accurate to its claim. Instead, Dent and Goldberg argued resistance to change has become a “received truth” (p. 38) that is accepted without question. In light of the impact of the studies by Coch and French (1948) and Lewin (1952), Dent and Goldberg wrote:

Lewin saw work taking place within a system of roles, attitudes, behaviors, norms, and other factors, any and all of which could cause the system to be in disequilibrium. For Lewin, resistance to change was a systems phenomenon, not a psychological one. (p. 31)

Dent and Goldberg added that resistance to change has gone through a “transformation in meaning from a systems concept to a psychological one” (p. 39).

Resistance has been noted as one element obstructing change (Dent & Goldberg, 1999; Ford et al., 2008; Foster, 2010; Piderit, 2000; van den Heuvel & Schalk, 2009; Zimmerman, 2006). The large variety of contextual variables associated with resistance poses challenges as well (Oreg, 2006; Oreg & Sverdlik, 2011).

Resistance to change is one of the factors blamed for the lack of sustained change in organizations (Coch & French, 1948; Evans, 1996; Lewin, 1952). Other researchers have begun to “rethink resistance” (Dent & Goldberg, 1999; Ford et al., 2008; Piderit, 2000). Identifying the factors that cause people to oppose change is important and could help leaders consider the effects prior to implementing change.
Dent and Goldberg (1999) contended the meaning of resistance toward change, as originally conceived by Lewin (1952), is flawed. Lewin conceptualized resistance as being affected by any number of forces within the system. Other authors have defined resistance as a human phenomenon, particularly considering those perceived to be less powerful within the organization (Dent & Goldberg, 1999).

Some researchers have blamed resistance to change for the lack of sustained change within organizations (E. Boulding, 1988; Coch & French, 1948; Lewin, 1952; Porras & Robertson, 1983; Spreitzer & Quinn, 1996). Other researchers have challenged the idea that resistance obstructs change (Dent & Goldberg, 1999; Ford et al., 2008), whereas some have proposed resistance may not necessarily hinder change but instead can act as a resource leaders can use to plan effective change (Ford et al., 2008). Identifying the factors that cause resistance is important and could help leaders understand human reaction and allow them to consider the effects of change prior to implementation.

Foster (2010) researched individuals’ resistance, sense of justice, and commitment to change. His quantitative survey used Oreg’s (2003) Resistance to Change Scale, Colquitt’s (2001) Four-factor Organizational Scale, and the Herscovitch and Meyer’s (2002) Commitment to Change Scale to test the relationships between these constructs. Foster found a significant correlation in the relationship between justice and commitment but noted resistance was not connected to justice and commitment. Foster stated, “Conventional views of resistance to change are not useful for informing organizational change implementation efforts” (p. 3). Buy-in from affected individuals determines the success or failure of change.

Oreg (2003) developed an instrument to measure resistance using a 17-item resistance to change scale. The scale includes four dimensions: (a) routine seeking, (b) emotional reaction,
short-term thinking, and (d) cognitive rigidity. These dimensions are measured on a 6-point Likert-type scale. Oreg was able to connect an individual’s disposition to resistance. What he found as a result of this study was the scale “complemented work on institutional determinants of resistance to change and on the psychological processes underlying resistance by bringing individual differences to this important domain of organizational behavior” (Oreg, 2003, p. 691).

There is a need to understand more about the complexities of individual response to change associated with resistance to change (Dent & Goldberg, 1999; Lines, 2005). Piderit (2000) pointed out many studies about change have oversimplified individual responses, often dichotomizing them as either altogether negative or positive. In an effort to deepen understanding, Foster (2010) suggested moving away from a dichotomous framework of individual response to change. Szabla (2007) stated two factors contribute to change failure: (a) “researchers and practitioners have not established a consistent definition of resistance” (p. 526), and (b) “resistance has not been studied multidimensionally” (p. 526). Therefore, the current study embraced a multidimensional conceptualization.

**Perception**

The research question in the current study assumed human perception is related to reaction to change. According to Spreitzer (1996), an individual’s perceptions are powerful and reflect his or her unique interpretations of an organization. “People actively perceive (their) environments and are influenced by their perceptions rather than from some objective reality” (p. 445). Armenakis, Harris, and Mossholder (1993) noted readiness for change is similar to Lewin’s (1952) concept of unfreezing. Employees are able to see change as necessary. “Readiness for organizational change reflects an individual’s unique interpretive reality of the organization” (Eby et al., 2000, p. 422). The individually held perceptions are a response to what is happening
in the environment and help provide a vehicle for employees at the “crux of the change process” (Eby et al., 2000, p. 423) to make sense of their world and create order out of chaos (Wheatly, 1999).

Weber and Weber (2001) “explored employee trust in management, perceptions of supervisory support for improvement, and perceptions of organizational readiness for change during a planned organizational change effort” (p. 291). They performed a survey at two different times along the change continuum: before the onset of the change and 6 months after the change had been implemented. They found that in order to minimize the potential for negative outcomes, leaders need to establish policies and practices that consider employees’ attitudes and perceptions prior to the implementation of a planned change by “establishing clear goals for the change effort, launching aggressive communication and training efforts, and promoting opportunities for employee participation” (Weber & Weber, 2001, p. 298).

Historically, philosophers, scientists, artists, and psychologists have contemplated the role perception plays in human reaction. Table 3 indicates the trajectory of influences when analyzing perception. The role of perception in human reaction seems to be argued from two schools of thought. One is the idea developed by those involved with Gestalt psychology and indicates a genetic or developmental predisposition toward particular perceptions (Koffka, 1922). The other argues perception is measurable when connected to action (Bargh, Chen, & Burrows, 1996; Berlyne, 1951; Brewer, 1988; Hull, 1943). Table 3 contains a timeline of some researchers’ works that have influenced thoughts about the role of perception.
Table 3

History of the Investigation of Perception

<table>
<thead>
<tr>
<th>Theorist</th>
<th>Date</th>
<th>Definition &amp; Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clark Hull</td>
<td>1943</td>
<td>Perception acts as if it were a response</td>
</tr>
<tr>
<td>Daniel E. Berlyne</td>
<td>1951</td>
<td>Perception involves a relationship between behavior theory and the psychology of perception. “Perceptual whole is more than the sum of its elements and . . . the effects of a stimulus vary with the whole which is part” (Berlyne, 1951, p. 139).</td>
</tr>
<tr>
<td>Maralynn B. Brewer</td>
<td>1988</td>
<td>Stereotypes and social groups become automatically activated upon the perception of features (Chartrand &amp; Bargh, 1999).</td>
</tr>
</tbody>
</table>

This researcher focused on one public school district in the northeast United States. It is assumed that within this school district, a culture system exists. Federal and state governments have mandated schools to change, and teachers and leaders will be evaluated through scores students receive on one state test and one district determined measure. Members of this school district are in the process of implementing a newly mandated performance evaluation system. Employees arrive with internal perceptions of the culture system and react emotionally, cognitively, or intentionally toward change as a result of the system and their internal perceptions. Identifying perceptions of school culture as the change is occurring may assist in developing change strategies to assist in the process. The effects of perception on employees’ ability to consider change and the implementation of said change are complex and worth noting.

**Ambivalence**

Piderit (2000) proposed members of organizations might have positive intentions when resisting change. Piderit indicated reaction to change has been oversimplified in the research, “blurring our sense of the complexities of the phenomenon” (p. 783). Furthermore, Piderit
offered a multidimensional, or “cross-dimensional” (p. 783), view of respondents’ reactions to change. Ambivalence is defined as having “simultaneously attraction toward and repulsion from an object, person or action” (Merriam-Webster’s New Collegiate Dictionary, 1965, p. 28).

Piderit contended change agents should appreciate the “prevalence of ambivalence in individuals’ responses to change” (p. 792).

Oreg and Sverdlik (2011) completed a study to explore the individual response to an imposed change. They considered employees’ experiences of ambivalence and identified that an employee’s response is connected to his or her feelings about the change agent, which creates ambivalence. “Failing to consider the possibility of ambivalence often leads to the misinterpretation of employees’ reactions to change such that individuals who are presently perceived as indifferent may actually hold strong, yet conflicting, views about the change” (Oreg & Sverdlik, 2011, p. 337).

Meyerson and Scully (1995) and Newby-Clark, McGregor, and Zanna (2002) stated ambivalence influences perception and decisions. Those experiencing ambivalence need particular support through change and can offer valuable perspectives about their experience, affording those implementing change insight into how they might implement change in the future (Oreg & Sverdlik, 2011). “Educational systems are purposeful creations. People in these systems select, organize and carry out activities in order to attain their purposes” (Banathy & Jenlink, 1996, p. 45).

Ackoff (1981), Jackson and Keys (1984), Jantsch (1976), and Sutherland (1973) developed a way to classify human activity systems. They identified the following factors: (a) whether an organization is open or closed, (b) mechanistic versus systemic nature, (c) unitary versus pluralistic purpose, and (d) the degree of complexity. They also identified five types of
systems: rigidly controlled, deterministic, purposeful, heuristic, and purpose seeking (Banathy & Jenlink, 1996). Schools were identified as purposeful systems because they are:

Unitary but are more open than closed, and react to their environment in order to maintain their viability. Their purpose is established at the top, but people in the system have freedom to select operational means and methods. They have detailed dynamic complexity. (Banathy & Jenlink, 1996, p. 45)

Because schools are purposeful systems, understanding a systems view and connecting perceived culture systems and ambivalence toward change may provide insight that assists educators, thereby providing the best possible learning environment for all those working within public schools when change is introduced.

Banathy and Jenlink (1996) indicated there is a “yearning for understanding the wholeness of the human experience” (p. 40). When considering change in education, leaders must acquire a “systems view of education” (Banathy & Jenlink, 1996, p. 40). A systems view provides insight into self, the environment, and groups or organizations (Banathy & Jenlink, 1996). To quantitatively measure systems, the researcher defined the independent variable as the organizational traits identified by Denison et al. (2006).

Culture Systems

Researchers have established that culture is the most defining factor when considering and implementing change (Burke, 2008; Cameron & Ettington, 1988; O’Reilly & Chatman, 1996; Schein, 1996). The human reaction and action system (Szabla, 2009) identifies culture, which was defined by Schein (1990) as:

A function of the stability of the group, the length of time the group had existed, the intensity of the group’s experience of learning, the mechanisms by which the learning has
taken place (i.e., positive reinforcement or avoidance conditioning) and the strength and clarity of the assumptions held by the founders and leaders of the groups. (p. 111)

Szabla (2009) stated culture systems are key when considering human reaction to change. Organizational ideology, norms, and rituals determine emotional, behavioral, and intentional reactions toward change and move “us in a direction of questioning taken-for-granted assumptions, raising issues of context and meaning, and bringing to the surface underlying values” (Smircich, 1983, p. 355).

There are two main factors mentioned when defining culture systems in the current literature: (a) “organizations have culture” and (b) “organizations are culture” (Cameron, 2004, p. 3). For the purpose of this research, “culture represents how things are around here, or the prevailing ideology that people carry inside their heads. Culture affects the way organization members think, feel and behave” (Cameron, 2004, p. 3).

Cameron (2004) noted, “Culture is a socially constructed attribute of organizations which serves as the ‘social glue’ binding the organization together” (p. 3). “The key to assessing organizational culture, therefore, is to identify aspects of the organization that reflect its key values and assumptions and then give individuals an opportunity to respond to these cues” (Cameron, 2004, p. 4). Providing clarity of the current school culture will assist in identifying how culture systems affect reaction to change.

Public schools have developed a culture of resistance that has allowed for meaning, stability, and comfort (Schein, 1990). Understandably, changing schools is complex as they are bureaucratic and mature (Evans, 1996). Real culture change is “systemic change at a deep psychological level involving attitudes, actions, and artifacts that have developed over substantial periods of time” (Vaill, 1989, pp. 149-150). The idea of researching and analyzing
culture as a way to explain the success of organizations was demonstrated in Peters and
They found successful companies possessed cultures that communicated continuously and
cultivated a distinct culture that contributed to their success (Brown & Ulijn, 2004). Peters and
Waterman’s work promoted the idea that culture is an important aspect to consider when looking
at the success or failure of schools. Although it is important to note schools are not businesses
and students are not adults, Brown and Ulijn (2004) indicated that when looking at school culture,
“Schools are far more complicated than institutions, socially and politically” (p. 3).

Educational research has begun to make some connections between successful schools
and the influence of culture on success. Overall, school culture is complex and important in
school life (Stoll, 1998). Schein’s (1985) definition of school culture addressed the reality of the
day-to-day life at school and identified the complexities that exist when trying to analyze school
culture (Stoll, 1998): “The deeper level of assumptions and beliefs that are shared by members of
the organization, that operate unconsciously, that define in a basic ‘take for granted’ fashion an
organization’s view of itself and its environment” (p. 6).

Research indicates school culture and climate have a direct effect on all stages of the
change process (Deal, 1985; Lindahl, 2006; Martins & Terblanche, 2003; Tushman & O’Reilly,
1997). Deal and Peterson (1994) described how dysfunctional school cultures can hinder
organizational improvement and how strong beliefs and values can also constitute powerful
obstacles toward change (Erickson, Mattaini, & McGuire, 2004). Because school culture tends to
establish system stability and school improvement calls for change, uncertainty is established
within the systems entropy, introducing uncertainty (Deal, 1993). “It is not feasible to consider
large-scale school improvement without either working within the confines of the existing organizational climate and culture or attempting to modify them” (Creighton, 2007, p. 1).

Culture systems are unique to each organization and can operate consciously or unconsciously (Rousseau, 1990). Deal (1985) noted that change strategies need to fit with the culture of the organization for the change to work. Examining the culture that already exists within the school and creating a relationship between culture and human reaction may provide clues to create change strategies that assist in sustaining change.

Denison et al. (2006), Denison and Mishra (1995), and Denison and Neal (1996) have examined culture and effectiveness within organizations. “The relationship between culture and functioning of social systems has been a recurring theme in the social sciences for over 50 years” (Denison & Mishra, 1995, p. 204). Other researchers examining culture have used qualitative approaches, professing that culture should not be studied as a measurable variable (Meek, 1988; Sackmann, 1991; Siehl & Martin, 1990; Trice & Beyer, 1984).

Denison et al. (2006) developed, through extensive research, a survey to quantitatively measure culture effectiveness. Included in the survey are four trait indicators: involvement, consistency, adaptability, and mission. In addition, there are sub categories within the four traits. Involvement examines empowerment, team orientation, and capability development. Consistency includes core values, agreement, coordination, and integration. Adaptability analyzes creating change, customer focus, and organizational learning. Mission assesses strategic direction, intent, goals, objectives, and vision. As a result of Denison et al.’s organizational culture survey that has been implemented within 160 organizations and with 35,476 individuals responding, “a number of significant correlations between culture ratings and effectiveness demonstrate a substantial link between culture and organizational performance” (Denison et al.,
As defined in Figure 3, Denison et al. outlined each construct used as the independent variable for the current study.

<table>
<thead>
<tr>
<th>Change</th>
<th>Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptability (External)</td>
<td>Mission (External)</td>
</tr>
<tr>
<td>Involvement (Internal)</td>
<td>Consistency (Internal)</td>
</tr>
</tbody>
</table>

*Figure 3. Denison model of culture (1990)*

**Social Systems**

Schools are social systems. Within these systems, mandated changes have been implemented with little success (Baldridge & Deal, 1975; Banathy & Jenlink, 1996; Bennis, 1966; Charters & Jones, 1973; Kirst & Meister, 1985). Szabla (2009) identified social systems and defined this construct through the seminal work of Katz and Kahn (1966). Social systems are identified by the roles and relationships of the individuals within the organization. Each role is distinct and determines what people feel and think, as well as how they will behave (Katz & Kahn, 1966).

Social systems explain an individual’s reaction to change: “Societies and organizations consist of patterned behaviours, and the behaviour of each individual is determined to a considerable extent by the requirements of the larger pattern” (Katz & Kahn, 1966, p. 3). Schools are social organizations that are contrived and held together by psychological bonds (Katz & Kahn, 1966, p. 5). Therefore, in order to change an organization, there must be not only psychological and interdependent relationships between colleagues, but also interdependent behaviors and actions that must be conceptualized. In order for this process to begin, systems
theory must be a part of the equation, allowing for the understanding that the environment creates dependencies linking the micro and macro levels of discourse within organizations (Katz & Kahn, 1966).

Little and McLaughlin (1993) argued schools are at once “a formal organization” and a “social and psychological setting in which teachers construct a sense of practice, of professional efficacy, and of professional community” (p. 99). Louis, Kruse, and Bryk (1995) argued that to create a professional community, both structural conditions and social and human resources are essential (Penuel et al., 2010). The relationship between the formal and informal aspects of organizational functioning; how those relationships affect individuals’ attitudes, beliefs, and actions; and an alignment of the formal and informal aspects of schools as organizations are essential for developing a common vision (Penuel et al., 2010).

The notion of teachers’ professional identity has been framed in a variety of ways and engages people across social contexts, whether as educators, parents, students, taxpayers, voters, or consumers of news and popular media (Cohen, 2008). These highly contested discourses about teachers’ roles and responsibilities constitute an important context for research on teachers and teaching. Changes to the teaching profession affect teachers’ professional identity (Cohen, 2008). The roles held by the members of organizations (schools) guide the recipients’ reactions to change (Szabla, 2009). Schools are complex, deliberately created subsystems of society and are shaped to accomplish mandated goals (Giacquinta, 1973).

**Trait Systems (Personality)**

Szabla (2009) stated individual dispositions drive reaction to change and understanding these characteristics is critical to leading change. According to Evans (1996), no school innovation can succeed without attending to the realities of the lives of those within the
organization. Underestimating the human “components of change has routinely sabotaged programs to improve our schools” (Evans, 1996, p. 91).

Traits are habitual patterns of behavior, thought, and emotion, and are thus individual characteristics. Traits affect how change recipients respond to change. When change recipients respond to change, their individual dispositions drive how they respond. Some tend to resist whereas others tend to support change. Understanding individual characteristics is critical to effectively leading change (Szabla, 2009). Foster (2010) stated, “The overarching aim of this research was to investigate the nature of individual reactions to change in hopes of contributing to a better understanding of how organizations can make change efforts more successful” (p. 3).

A wide variety of variables have been considered as antecedents of change reactions. However, studies of these reactions have focused on either support of or resistance to change, overlooking the possibility that people may have intricate reactions that involve both strong support and resistance. Accordingly, employees’ reactions to change may be more complex than has been considered (Oreg & Sverdlik, 2011). Ford et al. (2008) indicated change agents are portrayed as undeserving victims of the irrational and dysfunctional reaction of change recipients. Mintzberg and Waters (1985) stated change is a situation that interrupts the normal patterns of the organization and calls for participants to enact new patterns, involving the interplay of deliberate and emergent processes that can be highly ambiguous.

Oreg (2003) developed a resistance-to-change scale to measure disposition and how it affects a person’s reaction to change and identified four factors: (a) routine seeking, (b) emotional reaction to imposed change, (c) cognitive rigidity, and (d) short-term focus. Using the measure, Oreg determined “Those that were dispositionally inclined to resist changes were more distraught by the change and reported an increased difficulty to work effectively” (p. 690).
To study change, it is important to identify systems, both conscious and unconscious (Rousseau, 1990), and the human reaction toward change. General systems theory is defined as organized complexity and was originally developed by Bertalanffy, who captured the dynamic relationship between biological organisms and their environment (Bowen, 1999, p. 61). At about that same time, Whitehead was developing a philosophy of organisms, and Weiss was exploring a systemic approach (Laszlo & Krippner, 1998). K. E. Boulding (1956) stated general systems theory was the “theory of everything. It studies all thinkable relationships abstracted from any concrete relationship or body of empirical knowledge” (p. 197). In order to understand the level of complexity that exists within public schools, it is fundamental to also consider the concepts brought forth in systems theory.

**Summary**

A review of the literature indicated American public schools demonstrate unique individual, systemic characteristics that define their culture, social, and trait systems to accomplish the task of educating students (Evans, 1996; Newmann & Wehlage, 1995; Reeves, 2009; Sarason, 1990). School staff comprises individuals with a variety of experiences, time dedicated to working within schools, and organizational positions (e.g., leaders, teachers, assistant teachers, other staff members, parent volunteers, students, etc.). These individuals react to change, often with ambivalence. Researchers have indicated a dichotomous response to change (Piderit, 1999, 2000) and studies have suggested failing to consider ambivalence as a factor detracts from the current research findings (Oreg & Sverdlik, 2011). The literature also indicated that social, trait, culture, perceptions, and ambivalence play a significant role in school reform and create challenges to change.
Chapter 3: Methodology

This chapter is organized as follows. First, the conceptual framework for this research is articulated. Second, the research question and hypothesis are identified. Third, the research design, including operationalization of variables, survey design, population, sample, instruments, data collection, data analysis, response rate, demographics, missing data, reliability, limitations, and ethical considerations are outlined.

Conceptual Framework

Systems methodology is the study of methods in systems for the purpose of generating knowledge and identifying and describing strategies, systems theory, and systems thinking for working with complex systems (Banathy & Jenlink, 1996). The tasks when utilizing systems methodology are to: (a) identify, classify, and characterize the nature of the problem; (b) identify the problem in context and content; (c) identify the type of system in which the problem is embedded; and (d) select specific strategies, tools, and methods that directly connect to the particular problem (Banathy & Jenlink, 1996). Systems methodology framed the research design for this study and guided the researcher’s methodology.

The problem investigated in this study is that although the government has mandated changes through the Massachusetts Education Reform Act (1993), NCLB (2002), and Race to the Top (2011), 70% of all change efforts eventually fail (Burke, 2011). In order to understand the variables associated with the lack of sustained change, the researcher chose to examine organizational culture and change ambivalence. The independent and dependent variables were identified and classified to better understand the problem. The researcher explored the relationship between change ambivalence and perceived organizational culture systems during the implementation of a mandated performance evaluation system embedded in a dynamic,
social system. The choice of variables and the level of complexity associated with this particular study directly connected to the problem.

**Research Question and Hypothesis**

The research question was designed to explore the relationship between inner contextual factors (i.e., culture systems) and the change ambivalence of school personnel during the implementation of a mandated evaluation system. Three factors (i.e., emotion, cognition, and intention), as identified by Piderit (1999), were used to measure the dependent variables. Four factors (i.e., involvement, consistency, adaptability, and mission), as identified by Denison et al. (2006), comprised the independent variable. The research question was, “What is the relationship between change ambivalence (Piderit, 1999) and organizational culture (Denison et al., 2006) as perceived by school staff in a northeastern United States school district during the implementation of a mandated performance evaluation system”?

The hypothesis was as follows:

**H1**: There is a positive relationship between the overall change ambivalence profile score and organizational culture.

**H2**: There is no relationship between the overall change ambivalence profile score and organizational culture.

**Operationalization of Variables**

The dependent variable was change ambivalence as measured by emotion, cognition, and intention of those asked to enact a change. Piderit (1999) developed the survey used in this study to measure reaction toward change (i.e., change ambivalence). Piderit (2000) proposed “a multidimensional view of responses to proposed organizational changes, capturing employee responses along at least three dimensions (emotional, cognitive and intentional)” (p. 783).
Participants were asked a number of questions to determine their reaction to a new mandated performance evaluation system. Emotional reactions were defined as “sympathetic nervous system activity that people have experienced in relation to an attitude object and subsequently associate with it” (Eagly & Chaiken, 1998, p. 272). “Emotions are a key element of the change process” (Szabla, 2009 p. 8).

Cognitive reaction was defined as “the nexus of the Human Reaction System and the most crucial variable for those leading change. In most instances, thoughts are based on what individuals feel and believe, and their resultant action plans” (Szabla, 2009 p. 12). Another definition is “an individual’s beliefs about the attitude object” (Piderit, 2000, p. 786).

Intentional reaction was defined as “the most complex and controversial” (Piderit, 2000, p. 786). An intentional response to a change comprises an individual’s plan to take action relative to the change (Bagozzi, 1992).

Culture affects how individuals respond to change. When human beings respond, they consider the meanings, beliefs, and frames of reference embedded in the culture to interpret the change and the values they will call upon to react (Bartunek, 1984; Draft & Weick, 1984). An organization’s ideology, norms, rituals and language, and symbols (Smircich, 1983) steer what emotions, beliefs, intentions, and behaviors are generated in a response system (Szabla, 2009). “Culture can be studied as an integral part of the adaptation process of organizations and . . . specific culture traits may be useful predictors of performance and effectiveness” (Denison & Mishra, 1995, p. 204).

The Organizational Culture Survey developed by Denison et al. (2006) was used to outline the independent variable and establish the respondents’ perceptions of the culture system of the school being surveyed. The participants voluntarily answered a number of questions to
determine the effect of each factor. The traits measured included: (a) involvement: “organizational members are committed to their work, and feel a strong sense of ownership… and have at least some input into decisions that will affect their work and feel that their work is directly connected to the goals of the organization” (Denison et al., 2006, p. 6); (b) consistency: “consistent organizations develop a mindset and create organizational systems that build an internal system of governance based on consensual support” (Denison et al., 2006, p. 7); (c) adaptability: “adaptable organizations translate the demands of the organizational environment into action” (Denison et al., 2006, p. 7); and (d) mission: “A mission provides purpose and meaning by defining a social role and external goals for the organization . . . A sense of mission allows an organization to shape current behavior by envisioning a desired future state” (Denison et al., 2006, p. 8).

The respondents answered the survey questions using a Likert scale. The survey was a self-report instrument administered to participants who responded to a series of questions by indicating to what extent they agreed with certain statements (Fraenkel & Wallen, 2009). “Each choice is given a numerical value, and the total score is presumed to indicate the attitude or belief in question” (Fraenkel & Wallen, 2009, p. G-4).

Pilot Study

The researcher solicited potential pilot participation from the Northeastern University College of Professional Studies network. The researcher asked those specifically involved in teacher and leadership roles within public schools to voluntarily participate in taking the survey and to provide feedback regarding clarity of directions and questions, as well as the time needed to complete the survey. Eleven colleagues willingly participated in the survey and provided some feedback. They indicated the questions were clear and the survey could be completed in 15 and
20 minutes. Pilot participants understood the meaning of the questions asked and did not indicate there was any ambiguity present as they participated.

**Survey Design**

A quantitative, correlation research design employing survey methodology was used as a framework to test the hypothesis. Correlational survey research “involves collecting data in order to determine the degree to which a relationship exists between two or more variables” (Fraenkel & Wallen, 2009, p. G-2). The researcher collected data utilizing survey research from a census sample design to ascertain perceptions of all the educational staff of one school district in the northeastern United States relative to the implementation of a mandated performance evaluation system. The Change Ambivalence Scale (Piderit, 1999) and the Organizational Cultural Survey (Denison et al., 2006) were administered online during a designated point in time to all professional staff and leaders within the district.

The variables could have been: (a) positively related, such that a respondent who perceived a positive school culture could also feel excited about the change; (b) not related at all, such that a respondent who perceived he or she was powerless could be happy about the change; or (c) negatively related, such that the better a respondent perceived the culture of the school, the less likely he or she would be to embrace change (Field, 2011). Correlational studies suggest only that a relationship between variables exists, not that one variable causes another (Fraenkel & Wallen, 2009).

This method provided a natural view of the respondents’ reactions. The researcher did not influence “what happens and the measures of the variables [will] not be biased by the researcher,” an “important aspect of ecological validity” (Field, 2011, p. 12). However, the study did not prove that one variable caused another to change (Creswell, 2009). The researcher only observed
the “co-occurrence of the variables” (Field, 2011, p. 13). Because the hypothesis was generated from theory, a quantitative approach was appropriate for this study.

Research has not clearly established the most effective time to measure response to change. Because people move through stages of change at different rates, researchers may be administering surveys either when respondents do not as yet have enough information to evaluate the change, or when respondents have already made their decisions about the change. (Szabla, 2006, p. 160)

Population and Sample

Population. “Responses to a change initiated that are neither consistently negative nor consistently positive which were previously ignored but are potentially the most prevalent type of initial response, can be analyzed as cross-dimension ambivalence in employees response to change” (Piderit, 2000, pp. 783-784). The population consisted of professional staff and school district leaders who were implementing a mandated performance evaluation system in the 2012-2013 school year.

There were approximately 375 professional staff and school district leaders who fit this criterion. The selected sample had characteristics that contributed to the factors being studied (Fraenkel & Wallen, 2009). To be included in the population, professional staff and school district leaders had to be full-time employees. There are many others employed within a school district (e.g., teaching assistants, food service staff, custodial staff, and so on). However, the target populations chosen were professional staff and leaders within the district (Ross, 1978). Socioeconomic status and ethnicity were not considered when selecting respondents. This sample included all full-time professional staff and leaders within the school district (see Table 4).
Table 4

*Survey Population*

<table>
<thead>
<tr>
<th>Group</th>
<th>Members</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Union members’ (Unit A and B Members)</td>
<td>Professional staff, department heads, assistant</td>
<td>364</td>
</tr>
<tr>
<td>B. Non-union members</td>
<td>Principals, Superintendent, directors of curriculum, pupil personnel director, and technology director</td>
<td>11</td>
</tr>
</tbody>
</table>

As a result of the demographic information, it was not possible to distinguish the difference between union and non-union members because leadership existed in both groups, A and B. The demographic information included gender, position (i.e., professional staff or leader), length of time working in the district, and length of time working in the field of education.

It was assumed the demographic characteristics of the schools’ personnel mirrored those of the population being studied. To limit the scope of the research and to reduce the impact of confounding variables, professional staff and school district leaders who were not full-time employees were not recruited to take the survey. All professional staff and district leaders who were willing to participate in the study were asked to complete the survey provided they met the minimum inclusion criteria.

**Sampling methodology.** Convenience sampling was used to extract the sample from the population. The individuals selected were available for this study, allowing for convenience. The researcher included other information, such as length of time on the job, from full-time employees, as well as other characteristics of the sample studied (Fraenkel & Wallen, 2009). Specifically, Merriam (1998) asserted this type of sampling technique is used due to restrictions of “time, money, location, and availability of sites or respondents” (p. 63).
This sampling method allowed the researcher to act within a certain period and under conditions that facilitated data collection. By its nature, convenience sampling sacrifices generalizability; therefore, it may not provide sufficient representation of the target population. This means those selected for the study may only partially represent the population being investigated. As such, replication may be necessary to fully validate the results (Creswell, 2009). Despite its deficiencies, convenience sampling is the best method of obtaining a sample population when time and conditions prohibit random sampling (Creswell, 2009). Thus, convenience sampling enabled the researcher to seek an approximation of the truth when obtaining the truth (e.g., via random sampling) and was conditionally prohibitive.

**Instrumentation**

Two separate surveys, combined into one continuous measure, were used in this study. The researcher chose Denison et al.’s (2006) Organizational Culture Survey and Piderit’s (1999) Change Ambivalence Scale to measure the relationship between the variables. In these surveys, Denison et al. identified four factors (i.e., involvement, consistency, adaptability, and mission), and Piderit identified three factors (i.e., emotion, cognition, and intention). The researcher presented the surveys to participants with an online survey (see Appendix G).

The independent variable was measured using Denison et al.’s (2006) Organizational Culture Survey. The researcher chose an established, intact instrument that was not modified (Creswell, 2009). To measure the organizational culture system affecting reaction to change, questions were asked about the perceived organizational culture systems using Denison et al.’s survey to gather evidence of the overall opinions of the respondents regarding the independent variable. The researcher was granted permission via email from the Denison Group on October 17, 2012, to use the survey (see Appendix B). Denison et al. (2006) utilized responses from
35,474 individuals in 160 organizations. Confirmatory factor analysis revealed good support for the theoretical structure. There was a high degree of homogeneity within the organizations and correlation “between organizational culture and performance” (Denison et al., 2006, p. 2).

The dependent variable was measured using Piderit’s (1999) Change Ambivalence Scale in order to investigate how ambivalence and social context shape attitudes toward change. The researcher modified a portion of the instrument. The survey item measuring emotional reaction was left as Piderit had created it; however, the cognitive and intentional reaction scales were modified to include only the positively stated responses (Creswell, 2009). The researcher sent the proposed modifications to Piderit and was granted permission via email to implement the study on October 3, 2012 (see Appendix C). This measured positive and negative emotions; positively directed cognitive and intentional responses experienced as a result of the proposed change. This survey was used to collect data from school personnel by direct administration of the survey instrument to the group (Fraenkel & Wallen, 2009) and was analyzed to either confirm or deny validity (Fraenkel & Wallen, 2009). Piderit determined reliability, assessing employees’ overall attitudes toward change, utilizing Cronbach’s alpha. Determining how respondents perceived the culture system as it relates to change ambivalence established relationships between the variables (Fraenkel & Wallen, 2009).

On October 18 and November 8, 2012, the researcher met with the superintendent of the northeastern U.S. school district with an outline of this study and a copy of the survey to ask whether he would grant permission for the survey to be administered to school personnel within this district. The superintendent granted permission (see Appendix B).

The survey was administered using Survey Monkey, a web-based survey tool (see Appendix G). Once approved by this researcher’s Institutional Review Board (IRB), a letter
requesting consent to participate in the web-based survey was sent to participants (see Appendix C). An introductory e-mail was sent on January 14, 2013, explaining the forthcoming survey to all participants (see Appendix D). Next, the researcher e-mailed the survey on January 21, 2013, to all professional staff and leaders in the northeastern U.S. school district, asking for their participation in this survey (see Appendix E). On January 28, 2013, an e-mail reminder was sent to participants (see Appendix F). Finally, the researcher closed the survey on February 4, 2013.

Data Collection

Data were collected from participants during a fairly short period. The data collection involved a web-based survey. In order to create the opportunity for a large sample, a web-based survey was most effective for this study. The sample design used for the correlational survey is depicted in Table 5.

Table 5

Survey Items

<table>
<thead>
<tr>
<th>Professional Staff / Leaders</th>
<th>Organizational Culture</th>
<th>Change Ambivalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions</td>
<td>Involvement (15 items)</td>
<td>Neg. Emotion (5 items)</td>
</tr>
<tr>
<td></td>
<td>Consistency (15 items)</td>
<td>Pos. Emotion (5 items)</td>
</tr>
<tr>
<td></td>
<td>Adaptability (15 items)</td>
<td>Intention (5 items)</td>
</tr>
<tr>
<td></td>
<td>Mission (15 items)</td>
<td>Cognition (5 items)</td>
</tr>
<tr>
<td>Demographics (4 items)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data Analysis

Once the data were collected they were entered into the SPSS version 21. A correlation was conducted to establish relationships between variables, address the research question, and test the hypothesis (Fraenkel & Wallen, 2009). A correlation coefficient was produced and
represented as a decimal somewhere between 0.00 and +1.00 or -1.00. The closer the coefficient is to +1.00 or -1.00, the stronger the relationship (Fraenkel & Wallen, 2009). The dependent variable for the hypothesis in the regression model was reaction (i.e., change ambivalence) to a mandated change. The independent variable used to test the hypothesis was the inner contextual factor: the organizational culture system. The hypothesis was accepted if there was a correlation \( (p < .01) \) between perceived organizational culture system and reaction to mandated change (Fraenkel & Wallen, 2009).

Correlation testing was performed in order to investigate a number of variables “by grouping those that are moderately or highly correlated with one another into factors” (Fraenkel & Wallen, 2009, p. 334). The researcher was then able to “determine if many variables can be described by a few factors” (Fraenkel & Wallen, 2009, p. 328). The analysis procedure was conducted using SPSS version 21. The results are presented in three discrete sections in Chapter 4 that include details of the analysis and a summary of results. The detail of analysis section includes a complete breakdown of the analysis conducted, including an evaluation of appropriate assumptions and final inferential results. The summary of results section includes a recapitulation of the study, the study design, and the results by hypothesis, and a preview of Chapter 5.

**Order of Analyses**

Demographic data are presented to construct a profile of the sample population tested. Those results are indicated below. Next, response rate and missing data were evaluated and dealt with accordingly. Finally, reliability and validity measures of the instruments are indicated.

**Demographics and response rate.** The convenient sample sent the online survey consisted of 375 professional staff members asked to participate; there were 150 responses received.
Included in Tables 6 through 9 are the respondents’ current position, gender, length of time working in the district, and length of time working in the field of education. Of those who participated, 85.4% were professional staff and 14.6% were educational leaders. Women outnumbered men 78.5% to 21.5%. Respondents who had worked within the district between 6 and 20+ years accounted for 78.6% and those working less than 5 years accounted for 21.4%. Only 7.6% had been working in the field of education for less than 6 years.

Table 6

**Current Position**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Staff</td>
<td>11</td>
<td>74.0</td>
<td>85.4</td>
<td>85.4</td>
</tr>
<tr>
<td>Leader</td>
<td>19</td>
<td>12.7</td>
<td>14.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>86.7</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>20</td>
<td>13.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7

**Gender**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>28</td>
<td>18.7</td>
<td>21.5</td>
<td>21.5</td>
</tr>
<tr>
<td>Female</td>
<td>102</td>
<td>68.0</td>
<td>78.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>86.7</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>20</td>
<td>13.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparing the demographic data with the data available through the DESE was a way to validate the relative responses. The results are depicted in Table 10.
Table 10

DESE District Data as Compared to Respondents

<table>
<thead>
<tr>
<th>Age / Time in Education</th>
<th>Department of Elementary and Secondary Education</th>
<th>Respondents of Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>430</td>
<td>102</td>
</tr>
<tr>
<td>Male</td>
<td>88.7</td>
<td>28</td>
</tr>
</tbody>
</table>

As a result of the demographics reported, those who responded had significant experience in the field of education and were women. The small northeast school district employs a total of 428 females and 87 males (Massachusetts Department of Elementary and Secondary Education, 2013). The majority of respondents were between the ages of 33 and 64, indicating the time served in education (Massachusetts Department of Elementary and Secondary Education, 2013). The results represent the sample population of interest for this study (Fraenkel & Wallen, 2009).

**Missing / replaced data.** Cases with missing data were detected by running frequency counts in SPSS version 21. Those cases with missing data on more than 5% of the items were summarily removed from further analysis (Field, 2011; Stevens, 2002). Those cases with missing data in less than 5% of the items were kept by imputing field means into empty cells (Field, 2011). Table 11 indicates the data points that were left blank by participants. Those were imputed and replaced with the mean of the respondent’s score for that subscale.
Table 11

*Data Lost Blank-Data Imputed Factors*

<table>
<thead>
<tr>
<th></th>
<th>Questions Left Blank</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denison et al. Involvement</td>
<td>1, 12, 4, 14</td>
<td>3.0, 3.0, 3.5, 3.71</td>
</tr>
<tr>
<td>Denison et al. Consistency</td>
<td>17, 18, 23, 24, 27</td>
<td>3.19, 3.29, 3.64, 3.31, 3.31, 3.5, 3.21</td>
</tr>
<tr>
<td>Denison et al. Mission</td>
<td>46, 47, 49, 51, 55, 57</td>
<td>3.00, 3.64, 3.71, 2.71, 2.71, 3.71, 3.00, 4.00, 2.79</td>
</tr>
<tr>
<td>Piderit Positive Emotion</td>
<td>61-5, 61-4</td>
<td>1.6, 3.0</td>
</tr>
<tr>
<td>Piderit Negative Emotion</td>
<td>61-7, 61-10</td>
<td>1.75, 2.5</td>
</tr>
<tr>
<td>Piderit Cognition</td>
<td>63-3</td>
<td>3.5, 4.75</td>
</tr>
<tr>
<td>Piderit Intention</td>
<td>62-5</td>
<td>4.25, 4.00</td>
</tr>
<tr>
<td><strong>Total Replaced</strong></td>
<td><strong>39</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 11 indicates a majority of the subscale left blank. The data could not be imputed for the following items and the data were excluded from the analysis. There were 19 respondents who did not complete the survey. Those scores were also excluded from the analysis reported in Table 12.

Table 12

*Data Lost Blank-Excluded Factor*

<table>
<thead>
<tr>
<th></th>
<th>Item #</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention (Piderit)</td>
<td>3 - 5 (3 of 5 missing)</td>
<td>3 of 5 items missing; data not replaced</td>
</tr>
<tr>
<td>Consistency (Denison et al.)</td>
<td>26-30 (5 items missing)</td>
<td>5 items from subscale missing; data not replaced</td>
</tr>
<tr>
<td><strong>Total # items excluded:</strong></td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
Reliability and Research Data

The respondents completed the web-based 85-item Organizational Culture Survey (Denison et al., 2006) and Change Ambivalence Scale (Piderit, 1999) that assessed the organizational culture and change ambivalence amidst a new mandated performance evaluation system. The independent variable consisted of four overarching areas (i.e., involvement, consistency, adaptability and mission) with three sub-sections, each overarching area addressed in the organizational culture measure and the dependent variable indicated three factors with four points of focus in the change ambivalence scale (i.e., positive emotion, negative emotion, cognition, and intention).

The inter-item reliability was computed utilizing Cronbach’s alpha to indicate the survey reflected the construct it was measuring (Field, 2011). Table 13 depicts the reliability and the set of items, producing results consistent with the overall survey (Field, 2011). Cronbach (1951) alpha was performed through SPSS version 21 to measure internal consistency, reliability, validity, and instrumentation strength (Fraenkel & Wallen, 2009). Though Piderit (1999) and Denison et al. (2006) previously validated their instruments, it was important to indicate instrument strength as the two established and valid surveys were combined into one continuous survey for this research.

The overall Cronbach (1951) alpha summary indicated .918 for the 60 items from Denison et al. (2006) and .670 for Piderit’s (1999) 20 items. Nunnally (1978) noted alpha coefficients that attain a score of 0.7 or greater are satisfactory to conclude an instrument’s reliability; however, when dealing with psychological constructs, values below 0.7 can be realistically expected (Field, 2011). The Cronbach’s alpha was completed for each subscale and ranged from .532 (Denison et al., 2006; Adaptability) to .919 (Piderit, 1999; Intention). Some of
the items on Denison et al.’s Organizational Culture Survey indicated they were reverse scaled. According to Field (2011), “These reverse-phrased items are important for reducing response bias; participants actually have to read the item in case they are phrased the other way around” (p. 675). Denison et al. and Piderit’s surveys had already been validated. Results are indicated in Table 13.

Table 13

<table>
<thead>
<tr>
<th>Valid Responses N</th>
<th>Subscale</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>142</td>
<td>Involvement</td>
<td>.864</td>
</tr>
<tr>
<td>142</td>
<td>Consistency</td>
<td>.709</td>
</tr>
<tr>
<td>133</td>
<td>Adaptability</td>
<td>.532</td>
</tr>
<tr>
<td>131</td>
<td>Mission</td>
<td>.808</td>
</tr>
<tr>
<td>128</td>
<td>Denison Total</td>
<td>.918</td>
</tr>
<tr>
<td>131</td>
<td>Positive Emotion</td>
<td>.862</td>
</tr>
<tr>
<td>131</td>
<td>Negative Emotion</td>
<td>.849</td>
</tr>
<tr>
<td>131</td>
<td>Cognition</td>
<td>.644</td>
</tr>
<tr>
<td>130</td>
<td>Intention</td>
<td>.919</td>
</tr>
<tr>
<td>130</td>
<td>Piderit Total</td>
<td>.670</td>
</tr>
</tbody>
</table>

Limitations

Although it may be appropriate to apply the results of the study to other school populations, the findings may not apply to all teachers and school district leaders in other parts of the United States (Bell, 1996).

Ethical Considerations

Ethical considerations included the participants’ right to anonymity. No identifying information was used. The risk level to participants was considered minimal. Further, during the
data collection process and before the data analysis began, each participant’s results were numerically coded to prevent identification (Field, 2011). The possibility existed that respondents could have been identified by their IP address; however, the researcher employed all possible security measures to ensure anonymity. As a result of the survey tool used and all of the security measures instituted by the researcher, the risk to respondents was minimized. Any technological risk was addressed in the consent document for web-based online surveys (see Appendix C). All participants were assigned a number assuring anonymity. The data were stored with the researcher and only the researcher’s advisor and statistician had access for the purpose of analysis.

**Summary**

This quantitative study was designed to explore the relationship between organizational culture and reaction to mandated change. This chapter described the research methodology used to accomplish this purpose. Additionally, this chapter described the sample, data collection procedures, and data interpretation/analysis. Response rates, demographics, and reliability of the instrument were provided.

Chapter 4 includes a description of the data collected, the data analysis procedures, and the results of the study as they pertain to the hypothesis and research question. Chapter 5 includes a discussion and an overview of the study, the interpretation of the findings, the implications of the findings, the limitations of the study, and suggestions for future research.
Chapter 4: Results

This chapter presents the results of the statistical analysis of the data and hypothesis testing. The purpose of this study was to investigate the extent to which organizational culture is related to change ambivalence for professional education staff amidst a newly mandated performance evaluation system. The secondary goal of the study was to present empirical evidence to support the ability to utilize quantitative findings in educational research and integrate those findings into practice. The results support the proposed theories offered in the literature. The study’s conceptual framework indicated a systems theory approach supported the various factors included in the study. The study hypothesized there would be a positive relationship between the culture system, or “the way we do things around here” (Burke, 2008, p. 23) and change ambivalence, causing resistance and lack of successful change in public schools. The overall structure of this chapter provides an overview of the research question, research process, and the results of the survey.

The results of this study included the analysis of the data, the research findings resulting from the data, and the acceptance or rejection of the hypothesis. The Change Ambivalence Scale (Piderit, 1999) and the Organizational Culture Survey (Denison et al., 2006) were used to collect ordinal data that measured reaction to change as related to the culture system when faced with a newly mandated performance evaluation system. The survey utilized Likert-type scales to gather results. The study assumed the ordinal data had a rational, statistical inference and interpreted the summed responses using a parametric statistical test (Field, 2011).
The study investigated one research question:

1. What is the relationship between change ambivalence (Piderit, 1999) and organizational culture (Denison et al., 2006) as perceived by school staff in a northeastern United States school district during the implementation of a mandated performance evaluation system?

The hypothesis proposed was:

H1. There is a positive relationship between the overall change ambivalence profile score and organizational culture score.

Participants

The researcher administered a web-based survey between January 28, 2013, and February 4, 2013. Three hundred and seventy-five full-time, professional staff members, working in a small northeast U.S. school district were asked to participate in the online survey. Participants described themselves as professional staff members (85.4%) and leaders (14.6%). A majority of the sample was female (78.5%) and male respondents accounted for 21.5% of the sample. The length of time working at this particular school district was: 1-5 years (21.4%), 6-10 years (20.6%), 10-20 years (36.6%), and 20+ years (21.4%). The subsequent time participants had been in the field of education was indicated as 1-5 years (7.6%), 6-10 years (13.7%), 10-20 years (36.6%), and 20+ years (42.0%).

Of those invited, 150 participants (40%) responded. Thirty-nine participants left some data points blank, which were replaced with the mean of their score for that subscale. Some of the data could not be imputed because the majority of the questions within that subscale were left blank. Nineteen participants had a number of missing values and it appeared they failed to finish the survey. Those scores were excluded from the analysis. Once the data were checked for accuracy and there was sufficient completion of items, the total number of participant scores
used for analysis ranged from 130 to 131 (34.6%). Those responses were considered for the sample. The researcher utilized convenience sampling; therefore, the results are only applicable to those within this school district who responded to the survey (Fraenkel & Wallen, 2009).

**Preliminary Data Analysis**

The preliminary data analysis included descriptive statistics, means, standard deviations, and frequency where applicable. Some of the items were left blank; data were imputed for some of the missing data points and the mean of the score for that subscale were reported. Sub-scores were calculated by summing up all of the items included in the Denison et al. (2006) Organizational Culture Survey (i.e., involvement, consistency, adaptability, and mission) as well as Piderit’s (1999) Change Ambivalence Scale (i.e., emotion, cognition, and intention).

To determine the groupings of the variables, the researcher analyzed eight subscales that measured involvement, consistency, adaptability, mission, cognition, intention, and negative and positive emotion. The scores among the scales were used to categorize each participant’s perception of the organizational culture and change ambivalence within this particular school district.

**Descriptive Statistics**

In Denison et al.’s (2006) Organizational Culture Survey, four subscales (i.e., involvement, capability, adaptability, and mission) were measured. Possible scores could range from 1 to 5, with a high score indicating a positive perception of the school culture as it relates to each subscale. The possible total scores on each subscale ranged from 15 to 75.

Involvement considers participants’ level of participation in the organization, authority, initiative, sense of ownership, value working together toward a common goal, and belief that the organization invests in continued growth. A mean score of 51.56 ($SD = 8.00$) was obtained.
Consistency was defined as shared values, sense of identity, members are able to reach agreement, and work together. The mean score of this subscale was 49.69 (SD = 5.86).

Adaptability was defined as participants’ believing the organization was able to create ways to meet change, react to customers, foresee future needs, and was driven by customer satisfaction. The mean score for this subscale was 50.56 (SD = 4.70). Mission addressed clear intentions, goals, objectives, and shared vision. The mean score for this subscale was 49.7 (SD = 6.98; see Table 14).

Table 14

Descriptive Statistics for Organizational Culture

<table>
<thead>
<tr>
<th></th>
<th>Involvement</th>
<th>Consistency</th>
<th>Adaptability</th>
<th>Mission</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/Frequency</td>
<td>142</td>
<td>136</td>
<td>133</td>
<td>131</td>
</tr>
<tr>
<td>Missing</td>
<td>8</td>
<td>14</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>Mean</td>
<td>51.5608</td>
<td>49.6989</td>
<td>50.5602</td>
<td>49.7883</td>
</tr>
<tr>
<td>SD</td>
<td>8.00840</td>
<td>5.86604</td>
<td>4.70110</td>
<td>6.98194</td>
</tr>
<tr>
<td>Variance</td>
<td>64.134</td>
<td>34.410</td>
<td>22.100</td>
<td>48.748</td>
</tr>
<tr>
<td>Minimum</td>
<td>31.00</td>
<td>33.00</td>
<td>34.00</td>
<td>29.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>75.00</td>
<td>62.00</td>
<td>62.00</td>
<td>64.00</td>
</tr>
<tr>
<td>Grand Mean</td>
<td><strong>3.4749</strong></td>
<td><strong>3.3194</strong></td>
<td><strong>3.3675</strong></td>
<td><strong>3.3209</strong></td>
</tr>
</tbody>
</table>

Table 15 provides a statistical representation of the dependent variable (i.e., emotion, cognition, and intention) and each of the subscales from the questions derived from Piderit’s (1999) Change Ambivalence Scale. Emotion was divided into two subscales: positive emotion and negative emotion. As Piderit indicated in her research, “the item measuring emotional responses toward the organizational change were best modeled with two factors” (p. 88); one reflecting positive emotional reactions and another, negative reactions. “Positive and negative
affect are not two ends of the same continuum, but are best represented as two separate dimensions” (p. 89).

The possible total scores on each subscale ranged from 5 to 25. The cognition subscale measured what participants thought about the new mandated performance evaluation system. The mean score was 16.84 (SD = 2.95). Intention measured the participants’ actions pertaining to the change and produced a mean score of 17.47 (SD = 3.84). Positive emotional responses indicated a mean score of 12.88 (SD = 4.24) and negative emotional responses yielded a mean score of 14.1 (SD = 4.54). The mean, maximum, minimum, and standard deviation scores are included in Table 15.

Table 15

Descriptive Statistics for Change Ambivalence

<table>
<thead>
<tr>
<th></th>
<th>Cognition</th>
<th>Intention</th>
<th>Positive Emotion</th>
<th>Negative Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/Frequency</td>
<td>131</td>
<td>130</td>
<td>131</td>
<td>131</td>
</tr>
<tr>
<td>Missing</td>
<td>19</td>
<td>20</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Mean</td>
<td>16.8416</td>
<td>17.4788</td>
<td>12.8824</td>
<td>14.1011</td>
</tr>
<tr>
<td>SD</td>
<td>2.95157</td>
<td>3.84007</td>
<td>4.24314</td>
<td>4.54590</td>
</tr>
<tr>
<td>Variance</td>
<td>8.712</td>
<td>14.746</td>
<td>18.004</td>
<td>20.665</td>
</tr>
<tr>
<td>Minimum</td>
<td>8.00</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>25.00</td>
<td>25.00</td>
<td>25.00</td>
<td>25.00</td>
</tr>
<tr>
<td><strong>Grand Mean</strong></td>
<td><strong>3.3683</strong></td>
<td><strong>3.4958</strong></td>
<td><strong>2.5765</strong></td>
<td><strong>2.8202</strong></td>
</tr>
</tbody>
</table>

Tables 16 through 19 represent the participants’ frequency distributions divided up by each subscale for the independent variables (i.e., involvement, consistency, adaptability, and mission) considered for this research from Denison et al.’s (2006) Organizational Culture Survey.
Involvement includes the following scales. Empowerment, “individuals have the
authority, initiative, and ability to manage their own work. This creates a sense of ownership and
responsibility toward the organization” (Denison et al., 2006, p. 6). Team orientation, “value is
placed on working cooperatively toward common goals for which all employees feel mutually
accountable. The organization relies on team effort to get work done” (Denison et al., 2006, p.
6). Capability development, “The organization continually invests in the development of
employee’s skills in order to stay competitive and meet on-going business needs” (Denison et al.,
2006, p. 6). See Table 16.

Table 16

<table>
<thead>
<tr>
<th></th>
<th>Frequency Distribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Empowerment</td>
<td></td>
</tr>
<tr>
<td>Most employees are highly involved in their work.</td>
<td>150</td>
</tr>
<tr>
<td>Decisions are usually made at the level where the best information is available.</td>
<td>150</td>
</tr>
<tr>
<td>Information is widely shared so that everyone can get the information he or she needs when it's needed.</td>
<td>150</td>
</tr>
<tr>
<td>Everyone believes that he or she can have a positive impact.</td>
<td>150</td>
</tr>
<tr>
<td>Business planning is ongoing and involves everyone in the process to some degree.</td>
<td>150</td>
</tr>
<tr>
<td>Team Orientation</td>
<td></td>
</tr>
<tr>
<td>Cooperation across different parts of the organization is actively encouraged.</td>
<td>146</td>
</tr>
</tbody>
</table>
(continued)
Table 16 (continued)

Involvement

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>People work like they are part of a team.</td>
<td>147</td>
<td>3.7221</td>
<td>.80108</td>
<td>0.7</td>
<td>12.9</td>
<td>21.8</td>
<td>56.5</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>Teamwork is used to get work done, rather</td>
<td>147</td>
<td>3.5850</td>
<td>.84273</td>
<td>4.8</td>
<td>13.6</td>
<td>27.9</td>
<td>46.3</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>Teamwork is used to get work done, rather</td>
<td>147</td>
<td>3.3810</td>
<td>.97456</td>
<td>1.4</td>
<td>17.7</td>
<td>17.7</td>
<td>51.0</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Teamwork is used to get work done, rather</td>
<td>147</td>
<td>3.5510</td>
<td>.96645</td>
<td>0.7</td>
<td>14.3</td>
<td>29.3</td>
<td>50.3</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>People work like they are part of a team.</td>
<td>147</td>
<td>3.7221</td>
<td>.80108</td>
<td>0.7</td>
<td>12.9</td>
<td>21.8</td>
<td>56.5</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>Teamwork is used to get work done, rather</td>
<td>147</td>
<td>3.5850</td>
<td>.84273</td>
<td>4.8</td>
<td>13.6</td>
<td>27.9</td>
<td>46.3</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>Teamwork is used to get work done, rather</td>
<td>147</td>
<td>3.3810</td>
<td>.97456</td>
<td>1.4</td>
<td>17.7</td>
<td>17.7</td>
<td>51.0</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Teamwork is used to get work done, rather</td>
<td>147</td>
<td>3.5510</td>
<td>.96645</td>
<td>0.7</td>
<td>14.3</td>
<td>29.3</td>
<td>50.3</td>
<td>5.4</td>
<td></td>
</tr>
</tbody>
</table>

Capability Development

|                                           | N   | M     | SD     |        |        |        |        |        |        |
|------------------------------------------|-----|-------|--------|--------|        |--------|        |        |        |
| Authority is delegated so that people can | 145 | 3.4558| .82952 | 5.5    | 18.6   | 24.8   | 49.0   | 2.1    |
| The "bench strength" (capability of people) | 145 | 3.2345| .96475 | 1.4    | 11.0   | 29.7   | 53.1   | 4.8    |
| There is continuous investment in the     | 143 | 3.4897| .80895 | 1.4    | 13.3   | 24.5   | 55.2   | 5.6    |
| The capabilities of people are viewed as  | 145 | 3.5035| .84649 | 3.4    | 12.4   | 33.1   | 44.1   | 6.2    |
| Problems often arise because we do not    | 145 | 3.3759| .90433 | 7.6    | 49.0   | 18.6   | 19.3   | 5.5    |

Consistency refers to agreement, core values, and coordination and integration.

“Members of the organization are able to reach agreement on critical issues. This includes both the underlying level of agreement and the ability to reconcile differences when they occur” (Denison et al., 2006, p. 7). “Members of the organization share a set of values which create a sense of identity and a clear set of expectations” (Denison et al., 2006, p. 7). “Different functions and units of the organization are able to work together well to achieve common goals.”
Organizational boundaries do not interfere with getting work done” (Denison et al., 2006, p. 7).

The results of this subscale are demonstrated in Table 17.

Table 17

*Consistency*

<table>
<thead>
<tr>
<th></th>
<th>Frequency Distribution (%)</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The leaders and managers “practice what they preach”.</td>
<td></td>
<td>143</td>
<td>3.2867</td>
<td>1.09173</td>
<td>5.6</td>
<td>22.4</td>
<td>19.6</td>
<td>42.7</td>
<td>9.8</td>
</tr>
<tr>
<td>There is a characteristic management style and a distinct set of management practices.</td>
<td></td>
<td>142</td>
<td>3.3818</td>
<td>.90448</td>
<td>2.1</td>
<td>17.6</td>
<td>24.6</td>
<td>50.0</td>
<td>4.9</td>
</tr>
<tr>
<td>There is a clear and consistent set of values that governs the way we do business.</td>
<td></td>
<td>143</td>
<td>3.4952</td>
<td>.86106</td>
<td>0.7</td>
<td>17.5</td>
<td>17.5</td>
<td>58.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Ignoring core values will get you in trouble.</td>
<td></td>
<td>142</td>
<td>3.8732</td>
<td>.85767</td>
<td>0.0</td>
<td>7.7</td>
<td>20.4</td>
<td>48.6</td>
<td>23.2</td>
</tr>
<tr>
<td>There is an ethical code that guides our behavior and tells us right from wrong.</td>
<td></td>
<td>143</td>
<td>4.2028</td>
<td>.65606</td>
<td>0.7</td>
<td>1.4</td>
<td>4.9</td>
<td>62.9</td>
<td>30.1</td>
</tr>
<tr>
<td><strong>Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When disagreements occur, we work hard to achieve “win-win” solutions.</td>
<td></td>
<td>143</td>
<td>3.3846</td>
<td>.84689</td>
<td>2.1</td>
<td>14.7</td>
<td>28.7</td>
<td>51.7</td>
<td>2.8</td>
</tr>
<tr>
<td>There is a “strong” culture.</td>
<td></td>
<td>143</td>
<td>3.4825</td>
<td>.87092</td>
<td>1.4</td>
<td>12.6</td>
<td>30.8</td>
<td>46.9</td>
<td>8.4</td>
</tr>
<tr>
<td>It is easy to reach consensus, even on difficult issues.</td>
<td></td>
<td>143</td>
<td>2.9111</td>
<td>.83899</td>
<td>1.4</td>
<td>34.3</td>
<td>37.1</td>
<td>25.2</td>
<td>1.4</td>
</tr>
<tr>
<td>We often have trouble reaching agreement on key issues. (Reversed Scale)</td>
<td></td>
<td>143</td>
<td>3.1079</td>
<td>.90914</td>
<td>2.1</td>
<td>25.9</td>
<td>35.0</td>
<td>31.5</td>
<td>4.2</td>
</tr>
</tbody>
</table>

(continued)
Table 17 (continued)

*Consistency*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>When disagreements occur, we work hard to achieve “win-win” solutions.</td>
<td>143</td>
<td>3.3846</td>
<td>.84689</td>
<td>3.5</td>
<td>22.4</td>
<td>42.7</td>
<td>30.1</td>
<td>1.4</td>
</tr>
</tbody>
</table>

**Coordination & Integration**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our approach to doing business is very consistent and predictable.</td>
<td>137</td>
<td>3.2701</td>
<td>.88703</td>
<td>0.7</td>
<td>24.1</td>
<td>25.5</td>
<td>46.7</td>
<td>2.9</td>
</tr>
<tr>
<td>People from different parts of the organization share a common perspective.</td>
<td>137</td>
<td>3.2796</td>
<td>.88858</td>
<td>1.5</td>
<td>21.9</td>
<td>26.3</td>
<td>46.7</td>
<td>2.9</td>
</tr>
<tr>
<td>It is easy to coordinate projects across different parts of the organization.</td>
<td>137</td>
<td>2.9051</td>
<td>.85649</td>
<td>1.5</td>
<td>35.8</td>
<td>35.0</td>
<td>26.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Working with someone from another part of this organization is like working with someone from a different organization. (Reversed Scale)</td>
<td>137</td>
<td>2.7737</td>
<td>.91549</td>
<td>3.6</td>
<td>43.1</td>
<td>27.0</td>
<td>24.8</td>
<td>1.5</td>
</tr>
<tr>
<td>There is good alignment of goals across levels.</td>
<td>137</td>
<td>3.4015</td>
<td>.84418</td>
<td>0.7</td>
<td>17.5</td>
<td>26.3</td>
<td>51.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Adaptability includes creating change, customer focus, and organizational learning. “The organization is able to create adaptive ways to meet changing needs. It is able to read the business environment, react quickly to current trends, and anticipate future changes” (Denison et al., 2006, p. 8). “The organization understands and reacts to their customers and anticipates their future needs. It reflects the degree to which the organization is driven by a concern to satisfy their customers” (Denison et al., 2006, p. 8). “The organization receives, translates, and interprets signals from the environment into opportunities for encouraging innovation, gaining knowledge, and developing capabilities” (Denison et al., 2006, p. 8). The scores are indicated in Table 18.
Table 18

Adaptability

<table>
<thead>
<tr>
<th></th>
<th>( N )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( SD )</th>
<th>( D )</th>
<th>( N )</th>
<th>( A )</th>
<th>( SA )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creating Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The way things are done is very</td>
<td>138</td>
<td>2.5652</td>
<td>.89570</td>
<td>8.7</td>
<td>44.2</td>
<td>29.7</td>
<td>16.7</td>
<td>0.7</td>
</tr>
<tr>
<td>flexible and easy to change.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We respond well to competitors and other</td>
<td>138</td>
<td>3.8928</td>
<td>.78786</td>
<td>0.0</td>
<td>8.0</td>
<td>12.3</td>
<td>60.9</td>
<td>18.1</td>
</tr>
<tr>
<td>changes in the business environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New and improved ways to do work are</td>
<td>138</td>
<td>3.5362</td>
<td>.85572</td>
<td>2.9</td>
<td>11.6</td>
<td>18.1</td>
<td>63.8</td>
<td>3.6</td>
</tr>
<tr>
<td>continually adopted.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempts to create change usually</td>
<td>138</td>
<td>3.3292</td>
<td>.93680</td>
<td>0.7</td>
<td>23.2</td>
<td>25.4</td>
<td>42.8</td>
<td>7.2</td>
</tr>
<tr>
<td>meet with resistance. (Reversed Scale)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Different parts of the organization</td>
<td>138</td>
<td>3.4420</td>
<td>.87977</td>
<td>1.4</td>
<td>15.2</td>
<td>27.5</td>
<td>49.3</td>
<td>6.5</td>
</tr>
<tr>
<td>often cooperate to create change.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Customer Focus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer comments and recommendations</td>
<td>135</td>
<td>3.5407</td>
<td>.79891</td>
<td>0.7</td>
<td>9.6</td>
<td>31.9</td>
<td>50.4</td>
<td>7.4</td>
</tr>
<tr>
<td>often lead to changes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer input directly influences our</td>
<td>135</td>
<td>3.4889</td>
<td>.86272</td>
<td>2.2</td>
<td>9.6</td>
<td>33.3</td>
<td>46.7</td>
<td>8.1</td>
</tr>
<tr>
<td>decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All members have a deep understanding</td>
<td>135</td>
<td>3.2296</td>
<td>.93793</td>
<td>2.2</td>
<td>22.2</td>
<td>31.9</td>
<td>37.8</td>
<td>5.9</td>
</tr>
<tr>
<td>of customer wants and needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The interests of the customer often</td>
<td>135</td>
<td>2.2143</td>
<td>.79422</td>
<td>12.6</td>
<td>63.0</td>
<td>15.6</td>
<td>7.4</td>
<td>0.7</td>
</tr>
<tr>
<td>get ignored in our decisions. (Reversed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We encourage direct contact with</td>
<td>135</td>
<td>4.2667</td>
<td>.66017</td>
<td>0.7</td>
<td>0.7</td>
<td>5.2</td>
<td>57.8</td>
<td>35.6</td>
</tr>
<tr>
<td>customers by our people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Learning</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We view failure as an opportunity for</td>
<td>134</td>
<td>3.4883</td>
<td>.85504</td>
<td>0.7</td>
<td>14.9</td>
<td>25.4</td>
<td>51.5</td>
<td>6.7</td>
</tr>
<tr>
<td>learning and improvement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
Table 18 (continued)

Adaptability

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation and risk taking are encouraged and rewarded.</td>
<td>134</td>
<td>3.4701</td>
<td>.9612</td>
<td>3.0</td>
<td>14.9</td>
<td>23.1</td>
<td>47.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Lots of things “fall between the cracks”. (Reversed Scale)</td>
<td>133</td>
<td>2.9350</td>
<td>.9945</td>
<td>3.0</td>
<td>37.6</td>
<td>27.8</td>
<td>24.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Learning is an important objective in our day-to-day work.</td>
<td>134</td>
<td>4.1354</td>
<td>.7112</td>
<td>0.0</td>
<td>3.0</td>
<td>9.7</td>
<td>56.7</td>
<td>29.9</td>
</tr>
<tr>
<td>We make certain that the “right hand knows what the left hand is doing”.</td>
<td>134</td>
<td>2.9776</td>
<td>.8966</td>
<td>3.0</td>
<td>28.4</td>
<td>40.3</td>
<td>24.6</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Mission refers to strategic direction and intent, goals and objectives, and vision. “Clear strategic intentions convey the organization’s purpose and make it clear how everyone can contribute and ‘make their mark’ on the industry” (Denison et al., 2006, p. 8). “A clear set of goals and objectives can be linked to the mission, vision, and strategy, and provide everyone with a clear direction in their work” (Denison et al., 2006, p. 8). “The organization has a shared view of a desired future state. It embodies core values and captures the hearts and minds of the organization’s people, while providing guidance and direction” (Denison et al., 2006, p. 9). The scores for this measure are indicated in Table 19.
Table 19

**Mission**

<table>
<thead>
<tr>
<th></th>
<th>Frequency Distribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td><strong>Strategic Direction &amp; Intent</strong></td>
<td></td>
</tr>
<tr>
<td>There is a long-term purpose and direction.</td>
<td>132</td>
</tr>
<tr>
<td>Our strategy leads other organizations to change the way they compete in the industry.</td>
<td>132</td>
</tr>
<tr>
<td>There is a clear mission that gives meaning and direction to our work.</td>
<td>132</td>
</tr>
<tr>
<td>There is a clear strategy for the future.</td>
<td>132</td>
</tr>
<tr>
<td>Our strategic direction is unclear to me. (Reversed Scale)</td>
<td>132</td>
</tr>
<tr>
<td><strong>Goals &amp; Objectives</strong></td>
<td></td>
</tr>
<tr>
<td>There is widespread agreement about goals.</td>
<td>131</td>
</tr>
<tr>
<td>Leaders set goals that are ambitious, but realistic.</td>
<td>131</td>
</tr>
<tr>
<td>The leadership has &quot;gone on record&quot; about the objectives we are trying to meet.</td>
<td>131</td>
</tr>
<tr>
<td>We continuously track our progress against our stated goals.</td>
<td>131</td>
</tr>
<tr>
<td>People understand what needs to be done for us to succeed in the long run.</td>
<td>131</td>
</tr>
<tr>
<td><strong>Vision</strong></td>
<td></td>
</tr>
<tr>
<td>We have a shared vision of what the organization will be like in the future.</td>
<td>131</td>
</tr>
<tr>
<td>Leaders have a long-term viewpoint.</td>
<td>131</td>
</tr>
<tr>
<td>Short-term thinking often compromises our long-term vision. (Reversed Scale)</td>
<td>131</td>
</tr>
<tr>
<td>Our vision creates excitement and motivation for our employees.</td>
<td>131</td>
</tr>
<tr>
<td>We are able to meet short-term demands without compromising our long-term vision.</td>
<td>131</td>
</tr>
</tbody>
</table>
Piderit’s (1999) Change Ambivalence Scale results are below. To recap, change ambivalence refers to “responses to a change initiated that are neither consistently negative nor consistently positive” (Piderit, 2000, p. 783). Tables 20 through 23 represent change ambivalence scores related to the dependent variables: (a) positive emotions, (b) negative emotions, (c) cognition, and (d) intentions relative to organizational culture when a small school district is amidst a newly mandated performance evaluation system. Participants were asked, “How do you feel about the new performance evaluation system”? The mean, standard deviation, and frequency distribution of the positive emotion scale are indicated in Table 20.

Table 20

<table>
<thead>
<tr>
<th>Positive Emotion</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Frequency Distribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SD</td>
</tr>
<tr>
<td>Interested</td>
<td>131</td>
<td>3.0153</td>
<td>1.15682</td>
<td>12.2</td>
</tr>
<tr>
<td>Happy</td>
<td>131</td>
<td>2.2672</td>
<td>.94319</td>
<td>23.7</td>
</tr>
<tr>
<td>Hopeful</td>
<td>131</td>
<td>2.8397</td>
<td>1.14231</td>
<td>15.3</td>
</tr>
<tr>
<td>Relieved</td>
<td>131</td>
<td>2.1450</td>
<td>.95371</td>
<td>26.7</td>
</tr>
<tr>
<td>Confident</td>
<td>131</td>
<td>2.6153</td>
<td>1.07263</td>
<td>18.3</td>
</tr>
</tbody>
</table>

The results of the positive emotional subscale when considering the newly implemented evaluation system were as follows: 33.6% were not interested and 39.7% were interested; 58.8% reported they were not happy; 39.7% reported they were not hopeful while 35.1% were hopeful; 69.4% reported they were not relieved; and 43.2% reported they did not feel confident in the new performance evaluation system. Table 21 indicates responses on the negative emotion subscale.
Table 21

Negative Emotion

<table>
<thead>
<tr>
<th></th>
<th>Frequency Distribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Frightened</td>
<td>131</td>
</tr>
<tr>
<td>Angry</td>
<td>131</td>
</tr>
<tr>
<td>Sad</td>
<td>131</td>
</tr>
<tr>
<td>Frustrated</td>
<td>131</td>
</tr>
<tr>
<td>Disgusted</td>
<td>131</td>
</tr>
</tbody>
</table>

The results of the negative emotional subscale when considering the newly implemented evaluation system were as follows: 42% reported they were not frightened and 49.9% reported they were frightened; 40.4% reported they were not angry and 21.4% reported they were angry; 42.7% reported they were not sad and 31.3% were sad; 59.6% reported they were frustrated while 19.1% were not frustrated; and 19.8% reported they were disgusted and 45.8% were not disgusted.

Participants were asked, “What are your thoughts about the new performance evaluation system”? The mean, standard deviation, and frequency score of the cognitive scale are represented in Table 22.
Table 22

*Cognition*

<table>
<thead>
<tr>
<th>Frequency Distribution (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td><strong>M</strong></td>
</tr>
<tr>
<td>I care about how this change will affect my workday</td>
<td>131</td>
</tr>
<tr>
<td>I can see the potential advantages of this change</td>
<td>131</td>
</tr>
<tr>
<td>This change seems likely to improve my job satisfaction</td>
<td>131</td>
</tr>
<tr>
<td>I care about how this change will affect our school as a whole</td>
<td>131</td>
</tr>
<tr>
<td>This change makes it likely that I will continue to work here.</td>
<td>131</td>
</tr>
</tbody>
</table>

Respondents reported they cared about how this new mandated evaluation system would change their day-to-day work and the effect it could have on the school as a whole. They reported they did not believe this system would improve their job satisfaction, yet were willing to look at the possible advantages associated with the change.

Participants were asked, “To what extent do you intend to . . .” The mean, standard deviation, and frequency scores of the intention scale are represented in Table 23.
### Table 23

*Intention*

<table>
<thead>
<tr>
<th>Frequency Distribution (%)</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help make the change effective</td>
<td>131</td>
<td>3.8168</td>
<td>0.69947</td>
<td>0.8</td>
<td>0.8</td>
<td>28.2</td>
<td>56.5</td>
<td>13.7</td>
</tr>
<tr>
<td>Speak about the advantages toward this change</td>
<td>131</td>
<td>3.1756</td>
<td>0.99600</td>
<td>4.6</td>
<td>19.8</td>
<td>37.4</td>
<td>29.8</td>
<td>8.4</td>
</tr>
<tr>
<td>Support the implementation of this change</td>
<td>130</td>
<td>3.5462</td>
<td>0.86366</td>
<td>2.3</td>
<td>6.9</td>
<td>35.4</td>
<td>44.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Encourage others to support the change</td>
<td>130</td>
<td>3.4308</td>
<td>0.94777</td>
<td>3.1</td>
<td>12.3</td>
<td>33.8</td>
<td>40.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Suggest ways in which to carry out this change</td>
<td>130</td>
<td>3.5096</td>
<td>0.87515</td>
<td>3.1</td>
<td>7.7</td>
<td>33.1</td>
<td>46.9</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Participants reported they were willing to help make the change effective, and would support the implementation of the change, suggest ways to carry out the change, and encourage others to support the change; however, they also reported they were not as likely to speak out about the advantages of this change. Overall, the survey produced a number of neutral responses. According to Likert (1932) the midpoint of the survey is “neither agree nor disagree.”

**Instrumentation Strength and Reliability**

Cronbach’s alpha scores were calculated to determine the reliability of measures in this sample. Overall, the alpha scores indicated the Denison et al. (2006) and Piderit’s (1999) surveys, performed independently from one another, were reliable. Although the adaptability alpha score was .532 and the cognition factor score .644, all other alphas in the survey ranged from .709 to .919 and were considered reliable.
Hypothesis Testing

The research question was, “What is the relationship between change ambivalence (Piderit, 1999) and organizational culture (Denison et al., 2006) as perceived by school staff in one district located in the northeastern, United States amidst a newly mandated performance evaluation system”? The hypothesis proposed was: There is a positive relationship between the overall change ambivalence profile score and organizational culture. A composite score of change ambivalence (Piderit, 1999) and organizational culture (Denison et al., 2006) was calculated following a correlational analysis matrix. Tables 24 and 25 indicate the statistical representations of relationships between the variables.

Intercorrelation matrices were also run and provided data to show pairwise correlation among all of the variables. The intercorrelation matrices provide reliability and consistency of the scores on each measure’s subscales. Listed next are the correlations on subscales for each measure separately. Piderit’s (1999) subscales were examined separately from the Denison et al. (2006) subscales. There was a high level of reliability across the subscales of each measure.

The Organizational Culture Survey (Denison et al., 2006) and Change Ambivalence Scale (Piderit, 1999) indicated the variables of each of the subscales correlated with one another (Howell, 2010). Those correlations are reported in Table 24 and 25.
### Table 24

**Organizational Culture Survey**

<table>
<thead>
<tr>
<th>Denison Involvement</th>
<th>Denison Consistency</th>
<th>Denison Adaptability</th>
<th>Denison Mission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.725**</td>
<td>.617**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Denison Consistency</td>
<td>Pearson Correlation</td>
<td>.725**</td>
<td>.519**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Denison Adaptability</td>
<td>Pearson Correlation</td>
<td>.617**</td>
<td>.519**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Denison Mission</td>
<td>Pearson Correlation</td>
<td>.678**</td>
<td>.699**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

### Table 25

**Change Ambivalence Scale**

<table>
<thead>
<tr>
<th>Piderit Cognition</th>
<th>Piderit Intention</th>
<th>Piderit Positive Emotion</th>
<th>Piderit Negative Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.609**</td>
<td>.474**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.609**</td>
<td>1</td>
<td>.585**</td>
</tr>
<tr>
<td>Piderit Intention</td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Piderit Positive Emotion</td>
<td>Pearson Correlation</td>
<td>.474**</td>
<td>.585**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Piderit Negative Emotion</td>
<td>Pearson Correlation</td>
<td>-.372**</td>
<td>-.459**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Pearson product-moment coefficient (Pearson $r$) was used to determine whether there was a positive relationship between variables (Fraenkel & Wallen, 2009). Statistical significance was measured using two-tailed test as a non-directional hypothesis was stated (Fraenkel & Wallen, 2009). Table 26 indicates “observed interrelationships” (Grimm & Yarnold, 1995, p. 111) in order to measure “the amount of variability in one variable shared by the other” (Field, 2011, p. 179). Some of the variables established there was a positive relationship between Denison et al. (2006) organizational culture and Piderit’s (1999) change ambivalence. Table 26 represents the results of the relationship between organizational culture and change ambivalence.

The most significant relationships between variables included:

- Denison’s involvement and Piderit’s cognition, intention, and positive and negative emotions were correlated as indicated in Table 26.

Table 26

**Correlational Overview (Involvement, Cognition, Intention, Positive and Negative Emotion)**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>Each individual's stamp appears on at least some corner of social reality” (Denison &amp; Mishra, 1995, p. 214).</td>
<td>Most indicated they are involved</td>
</tr>
<tr>
<td>Cognition</td>
<td>Cognition refers to “an individual’s beliefs about the attitude object” (Piderit, 2000, p. 786).</td>
<td>The overall belief was that the new evaluation system would affect their workday.</td>
</tr>
<tr>
<td>Intention</td>
<td>An intentional reaction is intended to discover, “a plan or resolution to take some action” (Piderit, 2000, p. 787).</td>
<td>They intend to help with the new evaluation system.</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>Interested, happy hopeful, relieved and confident</td>
<td>Respondents were not positive and ambivalent about the new evaluation</td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>Frightened, angry, sad, frustrated and disgusted</td>
<td>Frustration was indicated as most prevalent</td>
</tr>
</tbody>
</table>
- Denison’s consistency and Piderit’s intention and negative emotion were correlated as seen in Table 27.

Table 27

*Correlational Overview (Consistency, Intention and Negative Emotion)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency</td>
<td>It provides integration and coordination, however, “highly consistent cultures are often the most resistant to change and adaptation” (Denison &amp; Mishra, 1995, p. 215).</td>
<td>Participants reported that it is not easy to reach consensus, have trouble reaching agreements and that they work hard for a ‘win win’ outcome.</td>
</tr>
<tr>
<td>Intention</td>
<td>An intentional reaction is intended to discover, “a plan or resolution to take some action” (Piderit, 2000, p. 787).</td>
<td>They intend to help but will not speak out about the new evaluation.</td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>Frightened, angry, sad, frustrated and disgusted</td>
<td>Frustration was indicated as most prevalent</td>
</tr>
</tbody>
</table>

- Denison’s adaptability and Piderit’s negative emotions were correlated as noted in Table 28.

Table 28

*Correlation Overview (Adaptability and Negative Emotion)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptability</td>
<td>“The capacity to redefine underlying character in response to large-scale change” (Denison &amp; Mishra, 1995, p. 215).</td>
<td>Flexibility and resistance toward change were reported to be low comparatively. Respondents are not flexible or open to change.</td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>Frightened, angry, sad, frustrated and disgusted</td>
<td>Frustration was indicated as most prevalent</td>
</tr>
</tbody>
</table>

The overall correlations between variables are demonstrated in Table 29 and are explored further in Chapter 5.
Table 29

Relationship / Correlation Between Variables

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Denison Involvement (15 Questions)</td>
<td>Pearson Correlation .189*</td>
<td>.300**</td>
<td>.301**</td>
<td>-.231**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.031</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>Denison Consistency (15 Questions)</td>
<td>Pearson Correlation .120</td>
<td>.195*</td>
<td>.155</td>
<td>-.210*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.174</td>
<td>.026</td>
<td>.078</td>
</tr>
<tr>
<td>Denison Adaptation (15 Questions)</td>
<td>Pearson Correlation .112</td>
<td>.153</td>
<td>.168</td>
<td>-.290**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.205</td>
<td>.084</td>
<td>.056</td>
</tr>
<tr>
<td>Denison Mission (15 Questions)</td>
<td>Pearson Correlation .061</td>
<td>.167</td>
<td>.171</td>
<td>-.132</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.487</td>
<td>.057</td>
<td>.051</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

The involvement subscale was positively correlated with the cognition subscale; therefore, higher involvement scores were related to higher cognition scores. This result was moderately significant. Its p value was .031 and indicated correlation existed, but did not meet the .001 as would when there is a highly significant correlation. The involvement subscale was correlated with the intention and positive emotion subscale. The p value was .001, representing a high significance. The involvement subscale was negatively correlated with the negative emotion subscale. The p value was .08. The involvement score increased and the negative emotion score decreased. This was due to the construct of the questions, for example, “How do you feel about
The new evaluation system . . . angry, sad, frustrated” creating a negative rather than a positive correlation.

The consistency subscale was positively correlated with intention. The $p$ value was .026. The results were moderately significant. The consistency subscale was negatively correlated to the negative emotion subscale. The $p$ value was .017. The negative correlation was a result of the construct of the questions asked for this subscale.

Finally, the adaptation subscale was negatively correlated to the negative emotion subscale. The $p$ value was .001. This negative correlation was highly significant. Adaptation indicated a high score and negative emotion a low score. Again, the construct of the questions asked was negative.

The hypothesis for this study stated, “There is a positive relationship between the overall change ambivalence profile score and organizational culture score.” There were positive relationships between some of the change ambivalence and organizational culture subscales. For the other factors, the researcher could not determine a positive relationship with the remaining subscales.

**Summary**

This chapter provided descriptive information about the participants’ perceptions of school culture as related to change ambivalence amidst a newly mandated performance evaluation system in a small northeastern U.S. school district. The implications of the new evaluation system are vast and those participating in this survey had begun to incorporate this new system within their schools in August of 2012. Change is complex and multidimensional. The dimensions of change ambivalence “are interrelated, they are distinct, and each dimension of an individual’s attitude can vary somewhat independently of the other dimensions” (Piderit, 1999,
p. 108). The participants indicated some of the factors (i.e., involvement, consistency, and adaptability) positively related to all or some of Piderit’s (1999) cognition, intention, and positive and negative emotion scales. Involvement showed significant correlations with each of Piderit’s items and consistency also correlated with intention and adaptability negatively correlated with negative emotion. Mission did not indicate a correlation in any of Piderit’s subscales.

The most significant relationship was between involvement (i.e., empowerment, teamwork, and capacity development), and cognition, intention, and positive emotion and negative emotion. These constructs have not been considered in previous research; therefore, this finding is novel and may be worth future investigation.

In high-involvement systems, the social definition of reality is created by individuals in an inductive manner—each individual's stamp appears on at least some corner of social reality—and while the process may be instigated by a leader, it is not prescribed in detail. (Denison & Mishra, 1995, p. 214)

In order to address the research question and hypothesis, survey data were analyzed and reported. The survey was reliable and there was enough participation for statistical significance. There was a positive relationship discovered between some of Denison et al.’s (2006) four factors of organizational culture and Piderit’s (1999) factors of change ambivalence. The following chapter includes interpretations, conclusions, and recommendations.
Chapter 5: Conclusion

Interpretations of Results

The purpose of this study was to investigate the relationship between perceived organizational culture and change ambivalence amidst a newly mandated performance evaluation system within one northeastern, U.S. school district. It is estimated that every organization undergoes some form of change effort every 3 to 7 years, costing organizations thousands of dollars, and yet 70% of all change efforts eventually fail (Burke, 2011; Robinson, 2009). “Reforms have become assimilated to previous patterns of schooling and have rarely replaced what is already there” (Tyack & Cuban, 1995, p. 83). This chapter includes the interpretation of themes through the literature and indicates to what extent the chosen models (i.e., Organizational Culture Survey and Change Ambivalence Scale) were useful in explaining the variables of this study. The next section provides the researcher’s conclusions after interpretation. Following the conclusion, implications for theory, future research suggestions, and implications for practice are addressed.

In order to understand public school life amidst a mandated performance evaluation system, the researcher investigated the preexisting attitudes and tendency to resist change. Realizing the complexities of public schools in the United States, systems theory and social systems theory established the conceptual framework for this body of work. “Culture affects the way organization members think, feel and behave” (Cameron, 2004, p. 3). “A number of significant correlations between culture ratings and effectiveness demonstrate a substantial link between culture and organizational performance” (Denison et al., 2006, p. 2). The emotional, cognitive, and intentional responses as well as the ambivalence brought on by the introduction of change have the capacity to thwart efforts toward progress within schools. Change ambivalence
factors and perception of organizational culture, then, seem to provide the necessary constructs, providing a multidimensional analysis, a systems view, of the effects of change.

A correlational survey method was used to investigate the relationships between the variables. The background of problem, the research question, conceptual framework, and significance of this study were addressed. Literature about organizational change, school change, ambivalence toward change, perceived culture, and social and trait systems was presented. The research design and results were also addressed.

A review of the literature posited that mandates in education and bureaucratic structures require change, yet those changes are “not based on careful testing of hypotheses” (Pincus, 1974, p. 113). Resistance toward change has often been viewed as the culprit contributing to a lack of change; however, “Conventional views of resistance to change are not useful for informing organizational change implementation efforts” (Foster, 2010, p. 3). Often the emphasis is on the design of the change; less often is there consideration of the role of human perception and reaction (Szabla, 2009). Solutions are created in response to failures with little analysis of the variables or conditions that affect change (Murphy, 2008).

The literature suggested the factors and instruments chosen were significant for this study when investigating and initiating change. Prior research indicated culture and ambivalence affect change, though they have been presented as mutually exclusive. This is the first research available that hypothesized a relationship between perceived culture within the organization and ambivalence amidst change. The results revealed positive correlations between some of the variables investigated.

This study provided quantitative results measuring the perceptions of culture and ambivalence toward change of professional school personnel in order to provide an analysis of
the multidimensional variables affecting change within a dynamic, complex social system. This empirical study explored perceptions of organizational culture and change ambivalence relative to one another, providing quantitative results to help further explore why change has been unsuccessful, why change should be considered multidimensional, and why change is systemically complex.

The first set of descriptive statistics was examined to analyze sample size and “clean up the data” to make sure the statistical information was interpreted correctly. Following Piderit’s (1999) lead in her data analysis, the researcher split emotion into two subscales due to the valence of the emotional labels. This data provided the researcher with the mean, standard deviation, and variance of each subscale. Next, each survey question was analyzed and the mean, standard deviation, and frequency distribution were examined. Demographic data were reviewed. A Cronbach’s alpha indicated reliability and intercorrelation matrices were performed to show that correlations existed among the variables within the subscales (Howell, 2010). The data provided for this study are relevant. Individually, both surveys (Denison et al., 2006; Piderit, 1999) had been designed, implemented, and validated prior to this research. Pearson correlation (2-tailed) was formulated to indicate whether relationships existed between variables and confirm or deny the proposed hypothesis.

Limitations

There were some limitations presented for this study. Many of the participants may have felt the survey would take a greater amount of time than they were willing to give. Also, some participants may have been concerned their responses could be traced back to them. This may have produced some less than honest responses. The initial invitation indicated the survey would
take between 30 and 40 minutes, that it was voluntary, and respected anonymity to address these possible limitations.

A number of participants responded “neutral” on the Likert scale. It was difficult to ascertain the interpretation of this response. The researcher felt that in order to maintain the integrity and validity of the original instruments (Likert scale), the neutral category within the survey should be maintained. The results were interpreted with the awareness of these limitations. The researcher spent time thinking about what these neutral responses could mean. Did the participants clearly understand the question? Are those who answered the survey questions more passive? Are some of those responses due to the possibility that change is welcome? In the future, the researcher would add a comment box for those who responded neutral or would follow-up with interview questions and propose a mixed-methods research project.

The researcher was seeking to discover relationships between perceived organizational culture and change ambivalence; therefore, only those relationships that were correlated between defined variables were reported; causality between variables was not considered for this study (Creswell, 2009). The researcher’s intent was to collect data about the perceived culture of the school district, not the culture of the individual schools. Some of the respondents may have answered these questions considering their school rather than the district as a whole. The researcher was asked by participants whether they were to respond to the survey regarding their individual school or the district as a whole. This led the researcher to believe others may have also had the same question. Although the results are limited to this particular school district, a replication of this study in another comparable school district may lead to the generalization of such findings to assist other school districts as they implement mandated change. What might need to be considered are the culture ratings, keeping in mind that positive culture scores may
indicate a more difficult path toward policy change, as indicated in the correlational scores within the involvement, consistency, and adaptability subscales and their relationship to change ambivalence. Surprisingly, the results challenged current thinking regarding the need for teachers and professional staff to perceive a positive school culture in order to embrace change, when in fact it seems positive school culture is self-replicating and rigid (Kirchoff, personal communication, May 9, 2013).

**Interpretations of Themes**

Upon examination of the literature, particularly in education, it appeared there were a number of qualitative studies; for example, action research, interviews, case study, and ethnographies. There were fewer articles, particularly by policymakers, outlining quantitative, multidimensional research prior to initiating systems changes within public schools. Currently faced with the implementation of another mandated change, the researcher believed determining possible relationships between perceived culture and change ambivalence might assist as the change comes to fruition. The two measures were chosen and previously validated by the authors.

The Organizational Culture Survey developed by Denison et al. (2006) was originally used to survey 35,474 individuals in 160 organizations. They performed confirmatory factor analysis, examined the relationships between factors, considered the homogeneity of the respondents, and used criterion-related validity. The conclusion was that “this study demonstrated that the traits in this model are linked to various aspects of organizational performance” (Denison et al., 2006, p. 20). This instrument helped the researcher to “better understand organizational cultures [northeastern, U.S. school district] and the impact they have” (Denison et al., 2006, p. 20). The development of this instrument helped to legitimize “a broader discussion of the deeper levels of organizational culture and the influence that underlying beliefs
and assumptions have on individual behaviors and organizational systems” (Denison et al., 2006, p. 21). To investigate these underlying beliefs within the school district, change ambivalence was the chosen measure.

Piderit (2000) contended change agents should appreciate the “prevalence of ambivalence in individuals’ responses to change” (p. 792). “Failing to consider the possibility of ambivalence often leads to the misinterpretation of employee’s reactions to change such that individuals who are presently perceived as indifferent may actually hold strong, yet conflicting, views about the change” (Oreg & Sverdlik, 2011, p. 337). Piderit proposed a multidimensional view of reaction to organizational change. “Responses to a change initiative that are neither consistently negative nor consistently positive, which were previously ignored but are potentially the most prevalent type of initial response, can be analyzed as cross-dimensional ambivalence in employee’s responses to change” (Piderit, 2000, pp. 783-784). The data indicated participants were ambivalent about positive and negative emotion as they considered the evaluation system, with the exception of frustrated, happy, and relieved; clearly articulating ambivalence exists with frightened, angry, sad, and disgusted. Ambivalence was also demonstrated within the intention subscale, particularly when participants were asked whether they intended to speak out about the change.

Piderit (1999) developed a survey to measure resistance or attitude toward change. The results of her work indicated the need to take into consideration the role of ambivalence when enacting change. “Helping employees to cope with and explore the benefits of ambivalence would then become important components of effective organizational change interventions” (Piderit, 1999, pp. 154-155).
As a result of the study the researcher determined a correlation between some of the variables, producing positive relationships between:

- Denison’s involvement and Piderit’s cognition, intention, and positive and negative emotions
- Denison’s consistency and Piderit’s intention and negative emotions
- Denison’s adaptability and Piderit’s negative emotions

The negative correlations resulted from the construct of the questions asked in the negative emotion subscale; therefore, although not positively correlated, they correlated nonetheless. With the survey results, the researcher could not determine a positive relationship with the Denison et al. (2006) mission and Piderit (1999) emotion, cognition, and intention subscales. The study found a positive correlation between some of Denison et al.’s organizational culture subscales and Piderit’s Change Ambivalence Scale as indicated in Table 30.

Table 30

<table>
<thead>
<tr>
<th></th>
<th>Cognition</th>
<th>Intention</th>
<th>Positive Emotion</th>
<th>Negative Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>P r</td>
<td>.189*</td>
<td>.300**</td>
<td>-.231**</td>
</tr>
<tr>
<td>Consistency</td>
<td>P r</td>
<td>.195*</td>
<td></td>
<td>-.210*</td>
</tr>
<tr>
<td>Adaptation</td>
<td>P r</td>
<td></td>
<td></td>
<td>-.290**</td>
</tr>
</tbody>
</table>

Looking at the correlation it is important to acknowledge that, “In high-involvement systems, the social definition of reality is created by individuals in an inductive manner-each individuals stamp appears on at least some corner of social reality” (Denison & Mishra, 1995, p. 214). The
following tables and narrative provide the reader with those variables that correlated, not inclusive of those variables with no correlation.

Cognition refers to “an individual’s beliefs about the attitude object” (Piderit, 2000, p. 786). Participants answered questions about their perception of the culture along the involvement subscale in light of the new mandated performance evaluation system. Overall, participants indicated they were involved in the organization. For example, the largest number of participants (88%) agreed or strongly agreed they felt empowered while only 6.7% felt otherwise.

The lowest percentage score was within the involvement subscale. That question included those who believe information is widely shared so everyone can get it when needed. Cognitively, participants indicated they cared about how the new evaluation system would affect their workday as well as the entire school. Many did not believe the new evaluation system would improve their job satisfaction.

An intentional reaction is intended to discover “a plan or resolution to take some action” (Piderit, 2000, p. 787). Interestingly, many of the participants indicated they intended to help make the change effective (70.2%). Only 38.2% intended to speak out about this change, however. The mean intentional reaction score was 17.47 ($SD = 3.84$).

Emotion is the “individual’s feelings in response to the attitude object” (Piderit, 2000, p. 786). The positive emotional subscale asked whether participants were interested, happy, hopeful, relieved, and confident about the new evaluation system. A number of participants were not happy, not relieved, and lacked confidence. Those interested and hopeful were closely split.

The negative emotion subscale asked whether participants were frightened, angry, sad, frustrated, and disgusted with the change (i.e., mandated performance evaluation). Overall
participants reported they were quite frustrated, though not overwhelmingly frightened, angry, or sad.

Involvement and cognition, involvement and intention, involvement and positive emotion, involvement and negative emotion were all indicated as positively correlated. The relationships between variables are defined in Table 31.

Table 31

| Involvement, Cognition, Intention, Positive and Negative Emotion |
|-------------------------|-----------------|-------------------|
| **Construct**          | **Definition**                      | **Results**                        |
| Involvement            | “In high-involvement systems, the social definition of reality is created by individuals in an inductive manner—each individual stamps appear on at least some corner of social reality” (Denison & Mishra, 1995, p. 214). | Overall, participants indicated they were involved in the organization. For example, the largest number of participants (88%) agreed or strongly agreed they felt empowered while only 6.7% felt otherwise. The lowest percentage score was 47.3% of the involvement subscale. That question included those who believe information is widely shared so everyone can get it when he or she needs it. The overall mean score for this subscale was 51.56 ($SD=8.0$). |
| Cognition              | Cognition refers to “an individual’s beliefs about the attitude object” (Piderit, 2000, p. 786). | Cognitively, 88.5% of participants indicated they cared about how the new evaluation system would affect their workday and 81.7% also cared about how this would affect the entire school; 60.3% did not believe this would improve their job satisfaction. Cognition subscale had a mean score of 16.84 ($SD=2.95$). |
| Intention              | An intentional reaction is intended to discover, “a plan or resolution to take some action” (Piderit, 2000, p. 787). | Participants indicated they intended to help make the change effective (70.2%). Only 38.2% intended to speak out about this change, however. The mean intentional reaction score was 17.47 ($SD=3.84$). |
| Positive Emotion       | Emotion is the “individual’s feelings in response to the attitude object” (Piderit, 2000, p. 786). Interested, happy hopeful, relieved and confident. | A number of participants were not happy (58.8% versus happy 7.6%) or relieved (9.1% and not relieved 69.4%), and lacking confidence (43.5% versus those confident 22.1%). Interested and hopeful were closely split. 33.6% reported they were not interested while 39.7% indicated they were interested and 39.7% reported they were hopeful versus 35.1% reported they were not. The mean score indicated 12.8 ($SD=4.24$). |
| Negative Emotion       | Emotion is the “individual’s feelings in response to the attitude object” (Piderit, 2000, p. 786). Frightened, angry, sad, | Overall participants were quite frustrated (59.6% versus 19.1%) by the new evaluation system: 42% reported they were not frightened 28.3% reported they were; 40.4% reported they were not angry and 21.4% reported they were; 42.7% indicated they were not sad and 19.1% |
frustrated and disgusted. reported they were; and 45.8% reported they strongly disagreed or disagreed they were disgusted and 19.8% reported they were. The mean score for this subscale was 14.1 ($SD=4.54$).

“In the highly consistent cultures . . . social reality comes predefined” (Denison & Mishra, 1995, p. 214). Consistency is closely related to adaptation and change. It provides integration and coordination; however, “highly consistent cultures are often the most resistant to change and adaptation” (Denison & Mishra, 1995, p. 215).

The results as indicated by participants within this school district revealed core values were strong (93% reported their behavior was guided by an ethical code of conduct). There were three scores that were noted as low: (a) easy to reach consensus was reported as either agree or strongly agree at 26.6%; (b) 28% reported they agreed or strongly agreed they often had trouble reaching agreement; and (c) 31.5% reported they agreed or strongly agreed that when disagreements occurred they worked hard for a “win win” solution. The mean score for this subscale was 49.69 ($SD = 5.86$). The participants indicated they intended to help make the change effective (70.2%). Only 38.2% intended to speak out about this change, however. The mean intentional reaction score was 17.47 ($SD = 3.84$).

Consistency and intention and consistency and negative emotion were positively correlated. The definitions and results of this correlation are in Table 32.
Table 32

*Consistency, Intention, and Negative Emotion*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency</td>
<td>“In the highly consistent cultures... social reality comes predefined” (Denison &amp; Mishra, 1995, p. 214). Consistency is closely related to adaptation and change. It provides integration and coordination, however, “highly consistent cultures are often the most resistant to change and adaptation” (Denison &amp; Mishra, 1995, p. 215).</td>
<td>Core values were reported strong (93% reported their behavior was guided by an ethical code of conduct). There were three scores that were noted as low: (a) easy to reach consensus agree or strongly agree at 26.6%; (b) 28% agreed or strongly agreed that they often have trouble reaching agreement; and (c) 31.5% agreed or strongly agreed that when disagreements occur they work hard for a “win win” solution. The mean score for this subscale was 49.69 (SD=5.86)</td>
</tr>
<tr>
<td>Intention</td>
<td>An intentional reaction is intended to discover, “a plan or resolution to take some action” (Piderit, 2000, p. 787).</td>
<td>Participants indicated they intended to help make the change effective (70.2%). Only 38.2% intended to speak out about this change, however. The mean intentional reaction score was 17.47 (SD=3.84).</td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>Emotion is the “individual’s feelings in response to the attitude object” (Piderit, 2000, p. 786). Frightened, angry, sad, frustrated and disgusted</td>
<td>(59.6% versus 19.1%) reported frustrated 42% reported they were not frightened 28.3% reported they were; 40.4% reported they were not angry and 21.4% reported they were; 42.7% indicated they were not sad and 19.1% reported they were sad; and 45.8% reported they strongly disagreed or disagreed that they were disgusted and 19.8 reported they were. The mean score for this subscale was 14.1 (SD=4.54).</td>
</tr>
</tbody>
</table>

Adaptability refers to “the capacity to redefine underlying character in response to large-scale change” (Denison & Mishra, 1995, p. 215). “An effective organization must develop norms and beliefs that support its capacity to receive and interpret signals from its environment and translate these into internal cognitive, behavioral, and structural changes” (Denison & Mishra, 1995, p. 215).

Participants reported the school encouraged direct contact with students, parents, and guardians (93.4%) and often paid attention to the needs of those students, parents, and guardians (75.6%). However in the creating change subscale, 52.9% indicated things were not flexible, and
50% reported when creating change it was met with resistance, though they reported they responded well to the needs of the “customers” (79%). New and improved ways of doing business were often adopted (67.4%) and they responded well to competitors (79%). The survey was given to teachers and leaders within public schools; the 86.6% who reported agreed or strongly agreed that learning is an important objective seems logical. The overall mean score for this subscale was 50.56 ($SD = 4.70$).

Adaptation and negative emotion were correlated as well. In Table 33, the definition and results of the item analysis are indicated.

Table 33

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptability</td>
<td>“The capacity to redefine underlying character in response to large-scale change” (Denison &amp; Mishra, 1995, p. 215). “An effective organization must develop norms and beliefs that support its capacity to receive and interpret signals from its environment and translate these into internal cognitive, behavioral, and structural changes” (Starbuck, 1971, Kanter, 1983 as cited in Denison &amp; Mishra, 1995, p. 215).</td>
<td>Participants reported that customers (students, parent and guardians) are considered highly, encouraging direct contact (93.4%) and often paying attention to the needs of those students, parents, and guardians (75.6%). However in the subscale, creating change, 52.9% indicated that things are not flexible, 50% reported when creating change it is met with resistance, however, they reported that they respond well to the needs of the ‘customers’ (79%). New and improved ways of doing business are often adopted (67.4%) and they respond well to competitors (79%). 86.6% that reported they agreed or strongly agreed that learning is an important objective, seems apparent. The overall mean score for this subscale was 50.56 ($SD = 4.70$)</td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>Emotion is the “individual’s feelings in response to the attitude object” (Piderit, 2000, p. 786). Frightened, angry, sad, frustrated and disgusted.</td>
<td>Overall they reported they are quite frustrated (59.6% versus 19.1%) by the new evaluation system. 42% reported they are not frightened 28.3% reported they were; 40.4% reported they were not angry and 21.4% reported they were; 42.7% indicated they were not sad and 19.1% reported they were sad; and 45.8% reported they strongly disagreed or disagreed that they were disgusted and 19.8 reported they were. The mean score for this subscale was 14.1 ($SD=4.54$)</td>
</tr>
</tbody>
</table>
Discussion and Conclusions

The purpose of this study was to examine the relationship between organizational culture and change ambivalence amidst a newly mandated performance evaluation system in a northeast, United States public school district through a systems theory lens. The results showed correlations existed between involvement, consistency, and adaptability with cognition, intention, and emotion. This research supports, and will help further identify, perceptions of organizational culture and change ambivalence amidst mandated change. The results offer insight into how to proceed. Acknowledging ambivalence and setting up processes to support those who will be implementing change is a start. It may also help to be aware of the overall culture being demonstrated amongst staff members. Leaders need to take these factors into consideration and create processes that allow involvement, consistency, adaptability, and mission relative to the change. It may also be important to administer this survey to other Race to the Top school districts that are mandated to implement this new evaluation system. The results of this study support the literature review, as well as provide further information establishing relationships between change ambivalence and organizational culture.

Organizational change research has often focused on a single set of constructs. Change analysis has not considered a longitudinal view, and additional studies exploring the behaviors and attitudes of those enacting change were identified as lacking in the organizational change literature (Armenakis & Bedeian, 1999). Although resistance to change has often been blamed, it seems clear that resistance, identified as the failure of change, is worthy of a deeper investigation (Dent & Goldberg, 1999; Ford et al., 2008; Oreg, 2003; Piderit, 2000; Szabla, 2006). This study investigated multidimensional factors and considered the role of ambivalence and culture.
Since 1993, American public schools have been mandated to change (Murphy, 2008). Solutions are created in response to failures with little analysis of the variables or conditions that affect change (Murphy, 2008). Moreover, without understanding the multidimensional, complex constructs interwoven throughout the fabric of each school’s existence, sustained and successful change is not likely.

Schools are social systems (Baldridge & Deal, 1975; Banathy & Jenlink, 1996; Bennis, 1966; Charters & Jones, 1973; Kirst & Meister, 1985). The change process has been oversimplified (Clark & Guba, 1965; Giacquinta, 1973), particularly when considering a large-scale change like the new mandated evaluation system. In the 2014-2015 school year, student test scores will be used as a measure of educational practitioners’ expertise (DESE, 2010) and will be officially reported on the DESE database as well as on performance evaluations.

Perceptions of organizational culture and change ambivalence factors, then, seem to provide the necessary constructs, providing a multidimensional analysis, a systems view, of the effects of change.

In high-involvement systems, the social definition of reality is created by individuals in an inductive manner each individual’s stamp appears on at least some corner of social reality—and while the process may be instigated by a leader, it is not prescribed in detail. (Denison & Mishra, 1995, p. 214)

In consistent cultures, “social reality comes predefined” (Denison & Mishra, 1995, p. 214). The results appear to indicate a “strong culture” in this district overall. This may be why change is so difficult for schools. Public schools in America have a long-standing, historic, established culture of resistance (Wilms, 2003). The respondents are involved and consistency is strong, which can justify maintaining the status quo. As indicated by Denison and Mishra (1995)
with one organization they studied, “how involvement, over time, evolved into insularity and entitlement” (p. 216).

Well-integrated systems are often the most difficult to change, and highly adaptable systems may be less likely to achieve the high rates of efficiency or common purpose associated with consistency and integration. In a similar sense, mission and involvement may be contradictory. (Denison & Mishra, 1995, p. 216)

Despite education’s preoccupation with reforming structures, it is the system’s kaleidoscope webs of learning relationships that sustain the collaboration necessary for transformation. By linking all members of the community into conversations and networks of meaning, intricate communication networks and feedback loops establish the system’s capacity for engagement and interconnection around shared identity and purpose. They promote system dynamism, interdependence, and resiliency. (Marshall, 2006, p. 201)

The study found some positive correlations between involvement, consistency, and adaptability with cognition, intention, and emotion as school personnel in a northeastern U.S. school district are in the process of implementing the newly mandated performance evaluation system currently required and implemented in September of 2012. The researcher could not definitively find a correlation between mission and cognition, intention, and emotion. The researcher sought multidimensional perspectives, as organizational change and the human condition are complex.

Piderit (2000) stated ambivalence is demonstrated when there is conflict between constructs. Ambivalence was indicated within the dimension; for example, respondents reported they were not necessarily angry but frustrated (emotion) by the new mandated performance
evaluation; they reported they would support the change but would not speak out about the advantages (intention). These indicators of ambivalence were present within and between dimensions. Participants’ emotional responses did not match their intention to act.

The perceptions of organizational culture scores indicate participants believed there was a strong mission. According to their reports, there was long-term purpose, clarity, future strategy, leadership was “on record” about the objectives, and progress was tracked. Vision, a subscale included in mission, was fairly flat. Vision may be an area of future research or not as important as many leadership researchers have indicated.

Involvement, consistency, and adaptability were the three Denison et al. (2006) subscales that positively correlated with Piderit’s (2000) indicators within the Change Ambivalence Scale. Of those, involvement correlated with all of the change ambivalence dimensions.

Interestingly, participants indicated they would help make the change effective, yet would not speak out about the change. Speaking out about the change may risk the personal relationships participants have developed as members of the school district community. Speaking publically, supporting the new evaluation system may threaten the relationships between and among members of the school community. Those speaking positively about the change may be blamed for the change and risking this is not something many school personnel feel comfortable about. The survey results in the dimensions of involvement and consistency indicated a strong culture exists within this school district. That helps explain why participants would be less likely to publically reflect differences in opinion. If everyone feels involved and consistency is demonstrated, this could enhance the idea that the system is, in fact, closed, self-replicating, and rigid.
Surprisingly, mission and vision factors did not correlate positively with the Change Ambivalence Scale factors. There were a number of neutral responses, indicating: (a) participants did not understand the question, (b) participants did not care about the mission / vision, or (c) mission and vision did not seem important in the face of this particular change because participants were clear about the overall mission (which has not changed much over time).

Identifying those areas where perception of the school culture is in need of attention may assist those leading school districts. For example, the district used in this study might explore ways to incorporate vision into its mission, find other means for solving disagreements, connecting those in different schools within the district to work together, and learning about what may be “falling through the cracks.” It may also help to understand the ambivalence participants are experiencing in the face of a mandated change. This change is the first of its kind. Student test scores will be directly connected to teacher and leader performance evaluations.

This research examined the public school change process, providing empirical evidence with a systems theory approach. In the future, the researcher would like to focus on the areas that brought about the greatest correlations; involvement, a construct identified by Denison et al. (2006) as well as the negative and positive emotional implications as identified as one area of the Change Ambivalence Scale developed by Piderit (1999). This impending change, a new mandated performance evaluation system, requires a systemic investigation into the current culture within public schools and the ambivalence created as a result of the emotions, thoughts, and behaviors experienced by the change agents. The results have the potential to challenge prior organizational change literature as well. Researchers have stated positive culture is a pre-cursor to change, yet this is not consistent with the results of this study. In fact, the results indicate this
school culture is intact and possibly continues to self-replicate, causing rigidity and justifying the status quo (Kirchoff, personal communication, May 9, 2013).

**Implications for Theory**

As a systems theorist, the researcher investigated an interdisciplinary exploration of the many constructs that form a general phenomenon (organizational culture and change ambivalence), arranging a hierarchy of complexity within an organization’s individual behavior, and developed a level of abstraction appropriate to explain the phenomena (K. E. Boulding, 1956). The purpose of this study was to provide empirical data to support the literature with specific attention to perceived organizational culture (Denison et al., 2006) and change ambivalence (Piderit, 1999).

Among those responsible for initiating change, Caine (2004) asserted “human beings are systems of some sort” (p. 4). The study took into consideration the human reaction toward change when choosing variables. How participants felt, what they thought, and how they intended to act in the face of a newly mandated evaluation system, as well as their perception of the school district’s culture, were important key factors in this investigation.

Systems theory granted the researcher the ability to identify individual behaviors, actions, or changes and relate this behavior to the environment (K. E. Boulding, 1956). Organizational culture was measured using the Denison et al. (2006) Organizational Culture Survey and was the independent variable. The dependent variable was measured utilizing Piderit’s (1999) Change Ambivalence Scale. Both instruments had been previously validated by the developers, as well as through intercorrelation, to show pairwise correlation among all of the variables. The intercorrelation matrices provided reliability and consistency of the scores on each measure’s subscales as these two measures were used together for the first time for this research.
Social systems are both simultaneously open and closed. They are open to the exchange of their external environment, yet closed in terms of their culture systems. Public schools have not changed that much since their inception (Tyack & Cuban, 1995). Schools are self-replicating, continuously producing in their own self-image, reinforcing strong cultures and values. Culture controls social systems (Kirchoff, personal communication, May 9, 2013). As indicated in the results of the survey, the overall school culture was strong. Participants indicated the organization valued their input, was consistent, was somewhat flexible, and had an established mission, possibly justifying why change is unnecessary.

The Denison Organizational Culture Model illustrates four traits: (a) involvement, (b) consistency, (c) adaptability, and (d) mission. Piderit (1999) identified three factors contributing to ambivalence toward change: (a) cognition, (b) intention, and (c) emotion. Both studies were designed to analyze businesses rather than public schools. Although relevant for both business and public schools, as change agents populate both arenas, articulating the results of the survey is useful to better understand what future leaders or researchers could consider when incorporating change. An example of how leaders can incorporate these ideas is depicted in Figure 4.
Future Research

Future studies combining culture, ambivalence, and change could further develop these concepts, providing clarity of purpose. This may help leaders in organizations to better identify factors in the way of successful, sustainable organizational change. There are a number of insights the researcher would like to note for the future. This research study was conducted in a school district located in the northeast United States. As a result of the research method chosen to collect and analyze the data, the results are indicated as relevant to this district and not transferrable. However, future researchers may consider implementing this survey in other school districts prior to a change initiative. Having a multidimensional understanding of the current culture as well as clarity as to where ambivalence is prevalent may allow leaders to implement strategies to address perceived culture and change ambivalence. Results indicating a positive overall school culture in the involvement and consistency subscale scores is good news for the Superintendent. The researcher provided the Superintendent with the results and the response was positive. The downside of these results is that a positive culture could be indicative of inertia and an attitude of entitlement (Denison & Mishra, 1995). Positive overall consistency
sub-scores, closely related to change and adaptation (Denison & Mishra, 1995), may also mean the district is integrated and coordinated, yet “highly consistent cultures are the most resistant to change and adaptation” (Denison & Mishra, 1995, p. 215). It seems that real, sustained change is unlikely unless the results are analyzed and schools find a way to transform from the inside out.

Mission, according to Denison and Mishra (1995), provides meaning and purpose and defines the importance and course of action of the organization. Because mission did not seem to correlate to ambivalence and there were a number of neutral responses, it might be worth further investigation into the relativity of this subscale within public schools. Mission is stagnant and it may mean the information about culture, values, and relationships may be more important when implementing change.

The researcher would also utilize the positive and negative questions asked in Piderit’s Change Ambivalence Survey rather than just the positive for intention and cognition. Both positive and negative questions were asked for the emotion factor. This factor provided more information about the level of ambivalence felt in the face of change. Including all of Piderit’s survey items across three dimensions providing both positive and negative questions would assist in further identifying the amount of ambivalence associated with change.

The researcher would also add a reminder to participants to address the culture of the district, not as their particular school. Although indicated in the directions of the survey, the researcher developed concern about how participants may have only considered the culture of their own schools versus the entire district. In order to maintain anonymity, it was imperative that individual schools were not named or inferred within the survey.
A mixed-methods approach is recommended for future research to further explore what participants were thinking as they answered neutral to these particular questions. The researcher may have asked, “What did you understand the question to mean?” and “Why did you respond that way (neutral)?” These questions would be particularly interesting when looking at where there was a positive correlation between variables (i.e., involvement, cognition, intention, and emotion) or no positive correlation (i.e., mission).

**Policy / Federal and State**

Many school districts across the United States elected to apply for Race to the Top grant money offered in 2008 by the Obama administration. Once awarded the grant, in order to collect money from the federal government, states were required to put in place a performance evaluation system, measuring the ability of teachers and administrators by analyzing student growth. Growth is calculated by how students perform on state generated tests and district determined measures.

Without analyzing the organization’s culture and change ambivalence, to develop a theoretical understanding of the public school system and the individuals within those systems, as generally, most policies do not consider the individual system they are meant to change (McLaughlin, 1987), policy development will not change the system as a whole. Regardless of mandates, public schools have remained basically the same in their fundamental operations since their inception (Tyack & Cuban, 1995).

**Implications for Practice / Design of Change Intervention**

The results indicate a strong culture and ambivalence toward change. Change is difficult and frightening for some. The district began implementing the new evaluation system beginning in September of 2012. The implications attached to this mandated evaluation system could cause
teachers and administrators to lose their jobs and therefore it is a high-stakes change. In order to assist those implementing the change, administrators of this school district analyzed the DESE’s (2010) documents and modules for the new mandated performance evaluation system. Training was provided to all staff in the district and then each school’s principal subsequently met to review.

The researcher and her assistant principal worked together to provide two goals (professional and student) that could be implemented as group goals rather than individual goals, stressing that this system was new for everyone and that administration and staff were all learning the system together. The high-stakes portion will not be implemented until the 2014-2015 school year, according the DESE (2010), which helped staff realize the opportunity existed to explore the system. A tracker was created that was easily accessible to staff and did not interrupt the rhythm of their day-to-day practice, tracking evidence to support the goals.

The researcher recommends change processes like this be replicated. This process allowed staff to slowly understand the new system. Regardless of the nature of the change, a process needs to be considered if any sustained change is to occur. The model created in Figure 5 provides an example of change process, considering the theoretical implications resulting from this research and suggested practices when implementing change.
Depending upon the complexity of the changes introduced, this process could provide the necessary elements to support sustained change within schools. Time is essential. Rather than a reactive proposition, a realistic timeframe should be implemented in order to address the needs of those responsible for enacting change. Understanding and considering a systems view is also essential when looking at the complexities associated with public schools.

Examining why change is difficult from a multidimensional perspective through gathering data to understand those enacting and affected by change assisted in understanding the organization’s culture and change ambivalence experienced when a mandated change is introduced.

**Summary and Reflection**

Systems theory incorporating systems thinking and systems learning has the potential to assist school leaders as they begin to introduce change. As stated earlier in this research, in order to compete effectively in the 21st century, change is essential and inevitable. Educators must develop strategies that help in connecting and understanding the macro systems (i.e., institutions) and the microsystems (i.e., human reaction) involved in change at all levels of the organization.
The changes that are occurring in organizations today have no historical precedents: “No other period in human history could match the present one in the sheer scale, speed, and global complexity of the changes and challenges we face” (Robinson, 2009, p. 19). Regardless of the level of angst change can provoke, change is omnipresent, and a deep, quantitative level of understanding may help place change strategies in the fore, making the inevitable more comfortable for those implementing and enacting change.
References


Creighton, T. (2007). *Organizational change in the field of education administration.* Retrieved from Connexions website: http://cnx.org/content/col10402/1.2


## Appendix A:

### Systems Theory Summary

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**Formal (structure) and informal (culture) perspective**  
Affected by the environment  
There are formal and informal of all six boxes (Purpose, Structure, Rewards, Helpful Mechanisms, Relationships, Leadership)  
**Limitations:** Organizations are too complicated to be represented by just 6 boxes  
**Strength:** Leadership at the center  

Open system, Inputs (environment, resources, history, strategy relatively fixed) Outputs (system functioning, group behavior, intergroup relationships, individual behavior)  
Transformation / Components (task, individual, organizational arrangements, informal organizational)  
**Limitations:** Ideas for determining which dimensions are more central, mostly descriptive, more congruence and incongruence could be recognized  
**Strength:** Comprehensive, sophisticated, cause and effect linkages, some identified congruence and incongruence  
More focus on change formulated 9 levers (external interface, mission, strategy, managing organizational mission and strategy processes, task, formal organizational structure, organizational process, people, informal organization) Unique to this model (technical, political and cultural (primary systems cutting across the 9 levers))  
**Limitations:** People are barely mentioned, individual analysis of the organization are a lower priority than group  
**Strengths:** Includes most of the variables that are critical to understanding change in organizations. TCP is unique and adds to understanding  
Transformational: Sweeping changes; Transactional: Day-to-day functions. Top half is transformational (external environment, mission, strategy, leadership, culture) and lower half, transactional (tasks, structure, management practices, work climate, motivation, individual and organizational performance, systems policies and procedures, individual needs and values)  
**Limitations:** Studies were selective and came from a variety of sources as it related to the model, piecemeal  
**Strength:** Evidence exists that supports the model, provides an explanation of open systems theory in action for planned change

Appendix B:

Permission Granted for Research Study

Marc Dupuis <mdupuis@falmouth.k12.ma.us> Mon, Nov 19, 2012 at 7:48 AM
To: Andrea Schwamb <aschwamb@falmouth.k12.ma.us>

Andrea,

I have reviewed your research proposal and questions and am happy to support you administering your survey to school personnel in the district.

Marc

Marc P. Dupuis
Superintendent
Falmouth Public Schools

Sandy Piderit <piderit@gmail.com> Wed, Oct 3, 2012 at 4:28 PM
To: Andrea Schwamb <aschwamb@falmouth.k12.ma.us>
Cc: d.szabla@neu.edu

Hi Andrea,

It was a pleasure to speak with you by phone! As I said, I am certainly willing to have you re-use or adapt any of the survey items from my dissertation. To document my approval in writing, I should be able to print whatever is required, sign it, scan it and email it back to you.

Dr. Piderit

Lecturer, Santa Clara University
Hi Andrea,

Your research proposal looks interesting. Attached are the survey items and a data template for use if you would like us to benchmark your data to a database of 931 organizations. I’ve included a University version of the survey as an example of how the items may be modified to an educational setting without losing their intent.

If you have any questions, feel free to contact me. I am looking forward to seeing the results of your work.

Best,

Ken Uehara
Appendix C:

Unsigned Consent Document for Web-Based Online Survey

Northeastern University, College of Professional Studies

Name of the Investigators: Principal Investigator: Margaret G. Kirchoff, EdD, Student Researcher: Andrea B. Schwamb

Title: Insights into Educations ‘Race to the Top’: A Correlational Survey Exploring the Relationship Between Change Ambivalence and Perceptions of Organizational Culture During a New Mandated Performance Evaluation System in a School District Located in the Northeastern, United States

I would like to invite you to participate in a web-based online survey. The survey is part of a research study whose purpose is to explore the relationship between change ambivalence (Piderit, 1999) and organizational culture (Denison et al., 2006) as perceived by staff during a new mandated performance evaluation system in a school district in the Northeast, United States. Specifically, the study seeks to uncover any relationship between Piderit’s (1999) 3 factors of change ambivalence (cognition, intention and emotion) and Denison et al.’s (2006) 4 factors of organizational culture (involvement, consistency, adaptability and mission). This survey should take between 30-40 minutes and be completed in one session.

The decision to participate in this study is strictly voluntary. You do not have to participate and you can refuse to answer any questions. Even if you begin the web-based survey, you can stop at any time.

There is no foreseeable risk or discomforts to you for taking part in this study.

Your part in this study is anonymous to the researcher. However, because of the nature of web-based surveys, it is possible that respondents could be identified by the IP address or other electronic record associated with response. Neither the researcher nor anyone involved with this survey will be capturing those data. Any reports or publications based on this research will use only group data and will not identify you or any individual as being affiliated with this project.

If you have any questions regarding electronic privacy, please feel free to contact Mark Nardone, NU’s Director of Information Security via phone at (617) 373-7901, or via email at privacy@neu.edu.

If you have any questions about this study, please feel free to contact Andrea B. Schwamb at schwamb.a@husky.neu.edu the person mainly responsible for the research. You can also contact Margaret G. Kirchoff, EdD. at mdkirchoff@gmail.com, the Principal Investigator.

If you have any questions regarding your rights as a research participant, please contact Nan Regina, Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02115. Telephone (617) 373-4588 or email irb@neu.edu. You may call anonymously if you wish.

By clicking the survey link below you are indicating that you consent to participate in this study. Please print out a copy of this consent form for your records.
https://www.surveymonkey.com/s/ambivculture

Thank you for your time.
Sincerely,
Appendix D:

Pre-notice E-mail for Teachers and Leaders

Subject: New Mandated Performance Evaluation System

Hello Colleagues.

I'm a doctoral student at Northeastern University in the final stage of my program. I'm required to conduct a doctoral research project and I'm thrilled that I received permission from Marc Dupuis, Superintendent, and Ernie Holcomb, President of Falmouth Education Association to do my research within our school district. For my project, I am focusing on the overall culture and staff's perception of the newly mandated performance evaluation system. Next week you will receive an online survey to your Falmouth Public Schools email address. I would greatly appreciate it if you would volunteer to complete the survey. All information will remain completely confidential and anonymous and by doing so, you will help me to complete my degree providing valuable insights about our district. Thank you again for your cooperation and support. If you have any questions, feel free to contact me at schwamb.a@husky.neu.edu.

Sincerely,

Andrea B. Schwamb
Appendix E:

Survey E-mail for Teachers and Leaders

Subject: Change Ambivalence and Perceptions of Organizational Culture Amidst a New Mandated Performance Evaluation System

Here is the brief survey that I notified you about last week. It will help us to gain insights about (1) how you feel, think and intend to act as we are implementing the new performance evaluation system and (2) how you perceive the organizational culture system. In addition, it will help me, a doctoral student who is exploring the relationship between change ambivalence and perceptions of organizational culture as that relates to the new evaluation system, complete my dissertation research. In about one week I will send out a reminder indicating that the survey is still available. Your participation is voluntary and anonymous and your employment will not be affected should you choose not to participate.

The survey should take between 30 and 40 minutes to complete. You will be answering using a Likert Scale 1-5:

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree.

You can complete the survey by clicking the link below, and answering the questions. Your participation is completely voluntary, your answers anonymous and your employment will NOT be affected should you not choose to participate.

If you have any questions, feel free to contact me at schwamb.a@husky.neu.edu.

Your participation is greatly appreciated.

Sincerely,
Andrea B. Schwamb
Appendix F:

Reminder Survey E-mail for Teachers and Leaders

Subject: Change Ambivalence and Perceptions of Organizational Culture Amidst a New Mandated Performance Evaluation System

Dear Participants,

First, thank you so much to those that have participated in taking this survey. This email is a reminder to consider taking a look at completing the survey below. Your participation is voluntary and anonymous and your employment will not be affected should you choose not to participate. It will help us to gain insights about (1) how you feel, think and intend to act as we are implementing the new performance evaluation system and (2) how you perceive the organizational culture system. In addition, it will help me, a doctoral student who is exploring the relationship between change ambivalence and perceptions of organizational culture as that relates to the new evaluation system, complete my dissertation research.

The survey should take between 30 and 40 minutes to complete. You will be answering using a Likert Scale 1-5:

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree.

You can complete the survey by clicking the link below, and answering the questions.

If you have any questions, feel free to contact me at schwamb.a@husky.neu.edu. Your participation is greatly appreciated.

Sincerely,

Andrea B. Schwamb
Appendix G:

Reaction to Change Survey (Denison et al., 2006; Piderit, 1999)

Professional Staff & Leaders Perception of Organizational Culture

Involvement
1. Most employees are highly involved in their work.
2. Decisions are usually made at the level where the best information is available.
3. Information is widely shared so that everyone can get the information he or she needs when it's needed.
4. Everyone believes that he or she can have a positive impact.
5. Strategic planning is ongoing and involves everyone in the process to some degree.

These questions are about school culture and involvement, specifically empowerment
1. Cooperation across different parts of the organization is actively encouraged.
2. People work like they are part of a team.
3. Teamwork is used to get work done, rather than hierarchy.
4. Teams are our primary building blocks.
5. The schools are organized so that each person can see the relationship between his or her job and the goals of the organization.

Team Orientation
1. Authority is delegated so that people can act on their own.
2. The “bench strength” (capability of people) is constantly improving.
3. There is continuous investment in the skills of teachers and leaders.
4. The capabilities of people are viewed as an important source of competitive advantage.
5. Problems often arise because we do not have the skills necessary to do the job. (Reversed Scale)

Capability Development
1. The leaders “practice what they preach.”
2. There is a characteristic leadership style and a distinct set of leadership practices.
3. There is a clear and consistent set of values that governs the way we do business within our school.
4. Ignoring core values will get you in trouble.
5. There is an ethical code that guides our behavior and tells us right from wrong.

Consistency, specifically core values
1. When disagreements occur, we work hard to achieve “win / win” solutions.
2. There is a “strong” culture.
3. It is easy to reach consensus, even on difficult issues.
4. We often have trouble reaching agreement on key issues. (reversed scale)
5. There is a clear agreement about the right way and the wrong way to do things.
Agreement
1. Our approach to teaching and leading is very consistent and predictable.
2. People from different parts of the school share a common perspective.
3. It is easy to coordinate projects across different parts of the organization.
4. Working with someone from another part of this school is like working with someone from a different organization. (reversed scale)
5. There is good alignment of goals across levels.

Coordination and Integration
1. The way things are done is very flexible and easy to change.
2. We respond well to parents, caregivers and other changes in the school environment.
3. New and improved ways to do work are continually adopted.
4. Attempts to create change usually meet with resistance. (reversed scale)
5. Different parts / positions within the schools often cooperate to create change.

Adaptability, specifically creating change
1. Parent, caregiver or community comments and recommendations often lead to changes.
2. Parent, caregivers, or community input directly influences our decisions.
3. All members have a deep understanding of parents, caregivers and community members wants and needs.
4. The interests of the parents, caregivers, or community members often get ignored in our decisions. (reversed scale)
5. We encourage direct contact with parents, caregivers and community members by our people.

Parent, Caregiver, Community Focus
1. We view failure as an opportunity for learning and improvement.
2. Innovation and risk taking are encouraged and rewarded.
3. Lots of things “fall between the cracks.” (reversed scale)
4. Learning is an important objective in our day to day work.
5. We make certain that the "right hand knows what the left hand is doing".

Organizational Learning
1. There is a long term purpose and direction.
2. Our strategy leads other schools to change the way they compete in their schools.
3. There is a clear mission that gives meaning and direction to our work.
4. There is a clear strategy for the future.
5. Our strategic direction is unclear to me. (reversed scale)

Mission, Specifically Strategic Direction & Intent
1. There is widespread agreement about goals.
2. Leaders set goals that are ambitious, but realistic.
3. The leadership has "gone on record" about the objectives we are trying to meet.
4. We continuously track our progress against our stated goals.
5. People understand what needs to be done for us to succeed in the long run.
Vision
Goals and Objectives
1. We have a shared vision of what our school will be like in the future
2. Leaders have a long-term viewpoint.
3. Short-term thinking often compromises our long-term vision. (reversed scale)
4. Our vision creates excitement and motivation for our teachers and leaders.
5. We are able to meet short-term demands without compromising our long-term vision.

1. How do you feel about the new performance evaluation system?:

Interested
Happy
Hopeful
Relieved
Confident
Frightened
Angry
Sad
Frustrated
Disgusted

2. This section focuses on your **intentional reaction** to the implementation of the new performance evaluation system.

To what extent do you intend to: (5 items)

Help make the change effective
Speak about the advantages toward this change
Support the implementation of this change
Encourage others to support the change
Suggest ways in which to carry out this change

3. This section focuses on your **cognitive reaction** to the implementation of the new Evaluation System. To what extent will you think about this change: (5 items)

I care about how this change will affect my work- day
I can see the potential advantages of this change
This change seems likely to improve my job satisfaction
I care about how this change will affect our school as a whole
This change makes it likely that I will continue to work here

Please answer a few questions about yourself to provide demographic information.
Please check one:

64. Position: Teacher ___ Leader ____

65. Gender: Male ____ Female _____

66. How long have you been working in this district

1-5 ___

6-10 ___

10-20 ___

20+ ___

67. How long have you been in the education field?

1-5 ___

6-10 ___

10-20 ___

20+ ___