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School Culture and Performance at Different Middle Level Structures

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Education

by

Martin Omar Gomez

December 2010

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ABSTRACT OF THE DISSERTATION

School Culture and Performance at Different Middle Level Structures

by

Martin Omar Gomez

Doctor of Philosophy, Graduate Program in Education
University of California, Riverside, December 2010
Dr. George A. Marcoulides, Chairperson

American educators and researchers have spent decades attempting to determine the most effective middle level school configuration. Although various models have been conceptualized in order to resolve one of our most extensive educational reform movements, a recent nationwide increase in K-8 schools suggest interested parties have accepted the K-8 concept for its favorable results as compared to middle schools. Some of the positives of the K-8 concept include: greater involvement of parents and staff, higher achievement, higher student self-esteem, and fewer incidents of student misconduct reflecting a more positive school climate. Other research, however, has shown that grade level organization does not directly correlate to higher achievement and that school climate, organizational values, and teacher attitudes are more significant in explaining school performance. The purpose of this dissertation was to investigate the inconsistencies of past middle level research and determine if K-8 school configurations outperform middle schools in California.
Findings partially support the construct validity of the originally-proposed Heck and Marcoulides model (1996b) across K-8 and MS structures and, demonstrate that K-8s outperform MS at the 8th grade level. Moreover, the study identified educationally important aspects of teacher-perceived cultural variables and how these perceptions collectively and specifically impact school performance in K-8 schools but not in middle schools. In order to develop higher achieving middle level schools, school leaders are encouraged to (1) prioritize team building strategies to empower staff, bolster collegiality, and allow the principal to focus on school performance, (2) connect parents to the school via meetings and workshops designed to improve parental support at home, and (3) dedicate time and resources for teachers to participate in decision-making and to discuss best teaching practices with their peers. These recommendations may apply to most school settings regardless of configuration. One problem with the MS structure may be that staff members have less time to develop relationships with students and their parents compared to the K-8 structure. Further, disparity in school performance can be attributed mostly to teacher perception differences of the school climate, teacher attitudes, and organizational values.
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Chapter 1

Introduction

A number of different models for school structure have been used for decades in the American educational school system. The junior high school (7th through 9th grade levels), middle school (6th through 8th grade levels), and K-8 (kindergarten through 8th grade levels) models were conceptualized and implemented as educators tried to determine the best school structure and format that would improve the academic performance of students within this age group. Recently, a number of stakeholders involved with the middle school grade model configuration appear to have accepted the K-8 model concept mainly because some of the current empirical and practical research findings concerning school outcomes for this particular model have been positive (Arcia, 2007; Byrnes & Ruby, 2007; Connolly et al., 2002; Juvonen et al., 2004; Offenberg, 2001; Weiss, 2008; Weiss & Kipnes, 2006; Yecke, 2006). For example, positive results for K-8 schools compared to other school models include: increased involvement of parents and staff members, overall higher student test scores, higher participation rates in extracurricular activities, greater levels of student leadership and self-esteem, students attending more prestigious high schools, students were less likely to be threatened, had less discipline issues, and viewed teachers as more humanistic (Arcia, 2007; Byrnes & Ruby, 2007; Connolly et al., 2002; Juvonen et al., 2004; Offenberg, 2001; Weiss, 2008; Weiss & Kipnes, 2006; Yecke, 2006).

A variety of other recent research results, however, have also shown that K-8 schools do not always outperform middle schools noting that the major factors in
determining student achievement include a motivated staff and strong leadership, and not simply the configuration of the school or a change in the educational program (Balfanz et al., 2002; Erb, 2006; Viadero, 2008; Weiss, 2008; Whitley et al., 2007; Yecke, 2006;). This dissertation will attempt to expand on that line of research and compare various dimensions of school culture in K-8 schools in contrast to middle schools, in order to explore whether or not the positive effects associated with the K-8 highlighted in the extant literature actually occur and, if so, to provide an understanding of the effects.

Statement of the Problem and Purpose of the Study

Although the field of educational research has developed a rich literature on the relationship between institutional culture and school performance during the past three decades, this research has not specifically examined how differences in grade-level configuration affect institutional culture, which in turn, impacts student achievement. Viadero (2008) has also indicated that much of the previous research has not always used rigorous advanced statistical techniques (e.g. structural equation modeling) to study such complex multivariate phenomenon, whereas Klump (2006) has argued that to date there are no large scale empirical studies explaining the relationships between middle school grade configuration and student achievement. Existing research has also suggested that more studies need to be performed in a variety of states within the United States, as most of the research on middle-grade configuration has taken place in the East Coast. Additionally, because research results on K-8 and middle school (MS) student achievement are inconsistent in attempting to determine which school structure is
outperforming the other and provide explanations as to why this may be occurring, there is clearly a need to provide further investigation on this issue. This research study will attempt to shed additional light on the relationship between middle-grade configuration (K-8 and middle school) and student achievement by examining student achievement results from a variety of schools located in Southern California. This research study will also attempt to explain why a particular school structure is outperforming the others based on teachers’ perceptions of school functions.

The study has three main purposes: (1) to examine the generalizability of a previously validated school culture model originally proposed by Heck and Marcoulides (1993a; 1996b) concerning how teacher perceptions of school culture explain student achievement across K-8 and middle schools; (2) to test the hypothesis that K-8 schools exert stronger positive culture influences over school performance than middle schools (Heck & Marcoulides, 1990); and (3) to determine if K-8 schools are outperforming middle schools on standardized exams at the 6th and 8th grade levels. The study will contribute to the existing knowledge base of the structural effects of grade-level configuration on institutional culture and student academic achievement (e.g. standardized test scores) at the middle school level.

As indicated above, this research study will build upon an existing conceptual model of culture and school performance (Heck & Marcoulides, 1990) and test several hypotheses comparing the variables pertaining to culture, across different types of school structures in order to determine how grade-level configuration influences school performance through the shaping of particular dimensions of institutional culture. The
Marcoulides and Heck (1993a) model essentially asserts that performance can be determined from gaining knowledge of an organization’s cultural environment. Heck and Marcoulides (1990) have previously shown that teachers’ and workers’ perceptions of the culture of their schools and business can predict performance. Furthermore, they determined that certain cultural variables have more of a direct or indirect impact on performance than others.

The focus of this study is upon teacher perception of culture obtained from teachers at K-8 and middle schools in Southern California and the school performance associated with these teacher perceptions at the different school organizational structures. This study will be conducted in order to test whether the Heck and Marcoulides (1996b) model provides an accurate alternative explanation pertaining to the patterns of interrelationships between school culture and academic achievement as associated with both K-8 and 6-8 grade-level configuration structural effects. The study will also contrast a number of direct and indirect structural effects for K-8 schools versus those for middle schools on school performance in order to understand and explain possible performance variations.

By comparing the two sets (K-8 versus middle school) of direct and indirect structural effects on school performance, this research study will provide insight with regards to how and why differences occur and to stimulate discussion on possible leadership behavior changes or school structural changes that have been correlated to higher school achievement. It is hoped that this study will help educational researchers obtain a better understanding of school processes and their impact on student
achievement as it attempts to advance the school culture literature and determine the construct validity of the Heck and Marcoulides (1996b) model at the middle school level. In addition, this study will seek to determine whether the K-8 or the 6-8 grade-level configuration have different academic achievement results as reported in previous research studies.

**Research Questions**

The following research questions will be investigated in this study. These questions collectively provide the context and guidance for the dissertation:

1. Do K-8 schools have higher academic achievement than middle school (MS) at the 6th grade level?
2. Do K-8 schools have higher academic achievement than MS at the 8th grade level?
3. Is the Heck and Marcoulides (1996b) organizational culture model generalizable to both middle schools and K-8 schools?
4. Do the school culture factors have different effects in K-8 schools compared to MS in explaining achievement?

Addressing each of the above research questions will be accomplished via the following specific hypothesis (these will be elaborated further in Chapter 3):

1. K-8 students will have higher levels of achievement as evidenced by their CST test scores than MS students in 6th grade.
2. K-8 students will have higher levels of achievement as evidenced by their CST test scores than MS students in 8th grade.
3. The Heck and Marcoulides (1996b) model will fit well with data from both K-8 and MS teachers.
4. The magnitude of the direct and indirect effects in the Heck and Marcoulides (1996b) will be different for K-8 versus MS teachers leading to the following sub-hypotheses:

A. At K-8 schools, increased levels of collaboration, innovation and participation in decision making will lead to increased levels of teacher socialization and collegiality and result in higher school performance.

B. At K-8 schools, increased levels of collaboration, innovation and participation in decision making will lead to higher levels of teacher attitudes and result in higher school performance.

C. At K-8 schools, increased levels of social relationships, communication, and collegiality will lead to higher levels of teacher positive attitudes about their students and parents which will result in higher school performance.

D. At K-8 schools, increased levels of collaboration, encouragement for innovation, and participation in decision making will be associated in more available resources and higher responsive principal actions which will result in higher school performance because the teachers will have the available resources and collaboration time to better help their students.

E. At middle schools, higher levels of perceived bureaucracy and more directives from administration will be associated with lower organizational climate as teachers will not socialize or communicate positively nor collaborate amongst each other which will result in lower school performance.

Definitions

The following list of terms will be used interchangeably throughout this dissertation:

- School achievement will also be explained and referenced as school performance, academic achievement, and mean scaled CST scores.

- K-8 schools will also be known as “elemiddle schools” (Hough, 2005).

- MS and junior high school designations will be used interchangeably.

- Young adolescents and MS students will be used to represent the same students.
• Culture is defined as the “patterns of shared values and beliefs that over time produce behavioral norms adopted in solving problems” (Hofstede et al., 1990).

• The Heck and Marcoulides (1996b) model will also be known as the proposed model.

• Professional Learning Communities will be referred to as “PLCs.”

Overview

The next five chapters will discuss the culture model, literature, data collection, analysis, and conclusions of the dissertation study. In particular, Chapter 2 focuses on the theory and conceptual framework. Chapter 3, the longest section, provides the literature review. Chapter 4 presents the study design and discusses the methodology. Chapter 5 displays the school districts and the number of teachers that completed the survey and presents tables of the direct and indirect path magnitudes across the K-8 and middle school groups. Finally, Chapter 6 explains the paths across the two groups, provides conclusions, implications for policy making, limitations, and suggestions for future research.
Chapter 2

Theoretical and Conceptual Framework

Because this study utilized the a priori proposed Heck and Marcoulides (1996b) model and applied it to a different school level, throughout this dissertation a considerable number of references are made to their earlier work wherein they created and validated the examined model. In their original study of the culture model, Marcoulides and Heck (1993a) proposed and tested a model of organizational culture and examined how their concept of culture could make a difference in explaining and predicting for-profit organizational productivity. Their model asserted and demonstrated that organizational performance can be determined from knowledge of an organization’s cultural environment. In a follow-up study, Heck and Marcoulides (1996b) subsequently applied the same model to schools and determined that teachers’ and workers’ perceptions of the culture of their schools, much like business culture, can predict organizational performance. Furthermore, Heck and Marcoulides (1996a) determined that certain cultural variables have different direct and indirect impacts on performance compared to the other variables in the model. Given these researchers’ previous results with regards to the predictive aspects of the model, this study intends to determine if there are any differences between the direct and indirect effects of cultural variables on different school structures. The study will also examine how teachers’ perceptions of culture explain performance in K-8 and middle schools by inspecting each school structure separately using the Heck and Marcoulides model.
Heck and Marcoulides (1996b) attempted to measure culture on two out of the traditionally augmented three visible fundamental levels of culture. Schein (1990) has indicated that the following three levels are essential when attempting to describe culture:

1. Visible artifacts: structure, technology, rules, stories, dress codes, schedule, etc.,
2. Organizational values, and
3. Underlying assumptions about the nature of organizational reality that are deeper manifestations of value.

Marcoulides and Heck (1993a) used the first two of these levels of culture as they stated that research on the third sublevel “is more difficult, as these underlying assumptions cannot be directly observed and measured” (p. 78). In order to measure culture’s visible artifacts and organizational values, Marcoulides and Heck (1993a) incorporated three components that together attempted to explain Schein’s perception of culture.

Marcoulides and Heck’s (1993a) original model hypothesized that organizational culture consists of interrelated components similar to those that had been originally proposed by Allaire and Firsanot (1984):

1. A socio-cultural system of the perceived functioning of the organization’s tasks, strategies, and practices,
2. An organizational value system, and
3. The collective beliefs and attitudes of the individuals working within the organization (Marcoulides & Heck, 2005, p. 141).

Marcoulides et al. (2005), similar to Schein (1992), theorized that “collectively, these three interrelated dimensions were found to affect performance in a variety of product- and service-oriented organizations” (p. 142). Allaire and Firsanot’s (1984) three
interrelated components were used to measure the above mentioned two visible levels of culture in the following manner:

- **Schein (1990)**: visible artifacts → perceptions of organization’s tasks, strategies, practices
- **Allaire and Firsirotu (1984)**: organizational values → organizational value system
- **Allaire and Firsirotu’s (1984) organizational value system** and the teacher’s collective beliefs and attitudes of the individuals are both covered by Schein’s (1990) organizational values as the fundamental level of culture as they (organizational value systems and the teachers’ collective beliefs) are measured strictly by teachers’ perceptions of the school’s values as well as the beliefs of the school.

Marcoulides and Heck (1993a) then developed five latent variables that attempted to explain Allaire and Firsirotu’s (1984) three components. “The model specifies five factors that together comprise visible aspects of school culture that, in concert, influence student achievement…As a group, the factors are viewed as loosely comprising students’ perceptions of the three subsystems of school culture” (Marcoulides & Heck, 1993a, p. 142).
In order to determine the validity of the Marcoulides and Heck (1993a) original conceptual model, Heck and Marcoulides (1996b) created a survey instrument called *The Organization of the School and Teacher Satisfaction with Their Work Environment: A Survey of Secondary School Teachers in Singapore (OSTSWE)*. This 42 question survey instrument measured five factors that collectively described Allaire and Firsirotu’s (1984) three aforementioned interrelated subsystems to examine how student performance can be explained by organizational culture.

Figure 2.1 depicts the original Heck and Marcoulides (1996b) proposed conceptual model. For simplicity, the figure includes only the factors or latent variables considered in the model. As a group, the factors are viewed as loosely comprising students’ perceptions of the three subsystems of school culture (i.e., socio-cultural, organizational process, and individual beliefs) proposed by Allaire and Firsirotu (1984) in Marcoulides et al. (2005, p. 142). In this figure there are six ellipses which are used to represent the factor or latent variables. Heck and Marcoulides (1996b) described the paths of the conceptual model in the following manner:

Organizational structure and organizational values are exogenous variables, in that factors outside the model determine their variability. We recognize that organizational structure and values are themselves dynamic processes. Because our data are cross-sectional, we reasoned that the school’s structure and its values would be reflective of wider sets of cultural values in the environment and, thus, relatively stable at any one point in time. Organizational climate, managerial processes, and teacher attitudes are endogenous, in that other variables in the model determine their variability. The exogenous variables, therefore, indirectly affect organizational performance through the endogenous variables in the model (p. 80).

The exogenous variables do not have a direct path to the dependent variable (school performance), which implies that their effect was more indirect in terms of influencing
performance. Both the latent variables and the observed variables used to measure each latent variable are discussed in more detail in Chapter 3.

Figure 2.1: Proposed Model of Organizational Culture and School Performance

The path diagrams of the model theoretically “summarize a number of relevant findings between how teachers perceive aspects of school culture and school outcomes” and permit one to study the magnitude of the strongest and weakest direct and indirect effects on school performance (Heck & Marcoulides, 1996b, p. 88).

The validity of the model has been shown in previous studies as various tests provide consistent support that the model’s components explain performance in different situations. For example, the proposed model of the relationship of culture to organizational performance has been supported within the business model (Marcoulides
& Heck, 1993a), within the school organization model (Heck & Marcoulides, 1996b), and once again at the school level with the students’ perceptions (Marcoulides et al., 2005). Although these three above mentioned research studies all used the same conceptual model, they each presented and utilized different surveys to tap into the factors that were aligned to their particular research topic. These researchers were successful with their original goal which was “to begin to develop a ‘roadmap’ that suggests possible relationships among variables comprising organizational culture and to estimate their relative effects on performance” (Heck & Marcoulides, 1993, p. 213). Also, it is important to understand that both culture and climate are affected by different spheres of influence and researchers cannot simply investigate single spheres when attempting to explain outcomes.
Chapter 3
Literature Review

A History of Organizational Culture

Researchers have attempted for many years to conceptualize the nature of the workplace culture in order to determine its relationship to the productivity and satisfaction of employees (Hoy, Hannum & Tschannen-Moran, 1998; Moran & Volkwein, 1992). This focus began in the 1950s when social science researchers such as Argyris (1954) studied variations in work environments within the banking system. His finding suggested that an atmosphere built on trust and openness would help unearth conflict and make it easier to implement changes that would improve the organization. Since the Argyris (1954) study, interest in organizational culture has blossomed and has been applied to several arenas, including the field of education. For this dissertation it is important to define culture and to collectively discuss the positive and negative outcomes of culture as the proposed model for this study contains five latent variables: organizational structure, organizational values, managerial processes, organizational climate, and teacher attitudes. Together, these five latent variables compose the researcher’s conceptual model of how culture can be measured in any organization.

Numerous researchers have proposed definitions of culture, consequently, there are different explanations of what comprises “culture” that have evolved as culture has been studied from different perspectives and lenses. Because there are multiple definitions of culture that have gained support in the extant literature, it has been
somewhat difficult for researchers to come to a definitional consensus on what actually constitutes “culture”. Furthermore, empirical research on culture has been difficult to assess, primarily due to the vague parameters of what is implied by the term itself.

Problems with empirical research on culture also include:

1. Previous research focused primarily on one element of culture, which ignores the multidimensional nature of the construct which is composed of several interrelated variables (Marcoulides & Heck, 1993),

2. Researchers are not sure whether culture reflects a “cause-effect” type of relationship with performance.

For the purpose of this dissertation the definition of culture that will be used is that provided by Hofstede et al. (1990). Hofstede et al.’s (1990) definition of organizational culture states that, culture is basically “patterns of shared values and beliefs that over time produce behavioral norms adopted in solving problems” (p. 77). This definition is utilized in this dissertation because it specifically focuses on teacher perceptions (shared values and beliefs) of the school’s behavioral norms.

Empirical research on culture is particularly important because culture has been shown to be correlated to positive outcomes in different organizations. For example, researchers have found that school culture affects the morale, productivity, and satisfaction of teachers, consequently having a positive or negative effect on the long term learning environment of a school (Brown et al., 1999; Taylor et al., 1995). The culture that exists within a school can develop positive teacher relationships and attitudes that may translate into increased academic achievement (Heck, 2000; Holt & Smith, 2002; Hoy et al., 1998; Hoy et al., 1990; Lumsden, 1998; Sweetland & Hoy, 2000). Furthermore, Lumsden (1998) established that it is the principal who is most influential
in creating a school culture that impacts the morale of the teachers. Firestone and Louis (1999) and other researchers (Bossert et al., 1982; Hallinger & Heck, 1996; Heck et al., 1996a; Heck et al., 1992; Heck et al., 1990; Marcoulides et al., 1993; Ogawa & Bossert, 1995) concur and state that administrators can influence culture, the school’s orderliness, and ensure that teachers focus on student achievement. However, administrators do not directly influence student outcomes because the administrators do not have daily instructional duty in the classroom. Rather, principals indirectly influence student performance through their instructional leadership behaviors (Heck et al., 1991; Metz, 1978).

As stated earlier and explained in more depth in the theoretical framework section later, Heck and Marcoulides (1996b) used organizational climate as a subsystem of their conceptual model of how they measured culture. The proposed model used in this dissertation measures the school’s culture by looking at the school’s personality (climate). For this reason, the next section provide an extensive discussion of climate in order to better understand how it is used to measure the more global concept of culture that was used in this study.

Organizational Climate

The theory of school climate has its roots in the study of organizational climate; which continues to date to be a focus for many researchers (Hoy et al., 1991; Moran & Volkwein, 1992). Researchers have indicated that it is essential for an organization to understand its climate in order to understand the interpersonal relationships between
stakeholders and know when it is necessary and possible to implement changes (Hoy et al., 1998). The studies on school climate, both past and present, have emphasized the worker’s shared perceptions about policies, practices, and procedures. Halpin and Croft (1963) conducted one of the most well-known studies of organizational climate in 71 suburban elementary schools (Hoy & Hannum, 1997). These two researchers conceptualized school climate on a continuum from “open” to “closed” and developed the first school climate survey that was later refined by Hoy and colleagues (Organizational Climate Description Questionnaire - OCDQ). Research in the area of school climate continues today due to the significant impact it can have on those learning and working within a school.

As with culture, researchers have created several definitions and utilized a variety of measurement surveys in order to better understand the concept of school climate. As noted by Hoy and Hannum (1997), because of the broad number of definitions and terms for climate, there are also a number of instruments that “have been systemically developed to examine the organizational climate of schools” (Hoy & Hannum, 1997, p. 292). To make matters more complicated, each instrument seems to measure a different aspect of climate and each survey has its own terms used to describe the climate in organizations. Some examples of these aspects include tone, atmosphere, personality, and ethos (Owens, 2004). “The concept of school climate itself is defined in a myriad of ways and is often merely a slogan rather than a carefully defined and meaningful construct” (Hoy & Hannum, 1997, p. 291).
Parsons (1967) identified three distinct levels of responsibility and control required by an organization to meet its climate needs: the technical, the managerial, and the institutional levels. Sweetland and Hoy (2000) posited that the “operational measures” identified within the technical, the managerial, and the institutional levels can be used as key aspects when measuring school climate health and have created a survey to measure these key levels of climate (p. 707). Hoy and Hannum (1997) also stated that “healthy schools successfully adapt to their environments, achieve their goals, and infuse common values and solidarity into the teacher work group” (p. 293).

The first level of climate, the technical, focused on the “actual processes of learning” (Parsons, 1967, p. 41). Hoy and Hannum (1997) expanded on this concept to include “the primary mission of the school – teaching and learning” (p. 293). Hoy and Hannum (1997) have stated that “teachers and supervisors have the primary responsibility for solving the problems associated with teaching and learning” (p. 293). Key aspects within the technical level focused on the teacher and student morale, staff cohesiveness, and academic emphasis present within the school (Hoy & Feldman, 1999). This can be described in terms of the trust, friendliness, and enthusiasm that are exhibited by the staff and students. The climate as seen from the technical level may include the principal’s actions, implemented changes, and attitude of the staff and students with respect to the school. The technical component of climate is important to understand because it helps to explain Schein’s (1990) two necessary culture levels, visible artifacts and organizational values. Further, and as conceptualized in the Heck and Marcoulides
(1996b) model, the technical component is measured by the managerial processes, organizational structure, and organizational climate factors.

The managerial level focuses on the ability of the leader to “control the internal administration of the organization” (Hoy & Feldman, 1999, p.86). Hoy and Feldman (1999) and Sweetland and Hoy (2000) found that the managerial level of climate analyzed the practices which leaders use to motivate their followers, attain and distribute resources, promote collegiality and collaborative relationships, and in building commitment to the organization. For example, effective principals manage their schools in such a way, so as to set high academic standards and clearly articulate their expectations for performance to both their teachers and their students (Hoy & Feldman, 1999). Teachers may believe that their school has a negative or closed climate if the school leaders are not effective managers. This may result in a chain reaction as teachers that are unhappy with their school leader will have unhappy and low performing students. The principal must also be able to work with external social systems in order to manage the internal subsystems. In the Heck and Marcoulides (1996b) model, the managerial component is measured by the managerial processes factor, the organizational climate factor, and organizational values factor.

The third level is the institutional aspect. This level has to do with how the principal manages the school within a larger social system which includes parents, neighbors, politicians, businesses, and any other stakeholders. The school’s climate is affected by how the community perceives the school and as a result the public will support or reject the principal, the staff, and the students. Therefore, the principal must
be able to protect the staff, the students, and the school from undue pressure from the public and outside organizations and concurrently work effectively with the same outside organizations. As indicated by Hoy and Feldman (1999), “teachers need a buffer between themselves and hostile outside forces” (Hoy & Feldman, 1999, p.86). In the Heck and Marcoulides (1996b) model, the institutional level component is measured by teacher attitudes, managerial processes, organizational values and organizational climate factors. In order to have a climate that will produce positive results, the principal must ensure that the school has a strong managerial level (the classroom), a strong technical level (transformational leadership), and a strong institutional level (public relations with the outside stakeholders).

Denison (1996) as summarized by Heck and Marcoulides (1996b) stated that the “boundaries between climate and culture remain ambiguous” (p. 298) and that the differences between the two concepts are not very clear. In short, culture is the values, the norms, and the tacit assumptions of the organization, while climate is the personality of the organization. Similarly, Hoy (2008) defined culture as a system of shared beliefs that hold the unit together and give it a distinctive identity, and organizational climate is the set of internal characteristics that distinguish one school from another and influence the member’s behavior. Hoy et al. (1990) explains that the difference between culture and climate is that culture is the shared assumptions, while climate is the shared perceptions of behaviors. Furthermore, because climate has mainly been studied quantitatively while culture has been studied qualitatively; this may be another reason that several of the ideas overlap with one another (Lindahl, 2006; Glick, 1985).
In this dissertation study, climate helps to explain culture as culture is conceptualized as the long term attitudes and behaviors of the organization’s values and not simply the climate, which is the teachers’ perception of their attitudes at that given moment. As a result, the Heck and Marcoulides model employed in this study measures the subsystem of organizational climate using a variety of different measured variables (reflected by 13 different questions on the survey), and which, combined with the other four subsystems, work in tandem to explain the organization’s culture. It is clear that climate is a necessary subsystem to measure culture because the teachers’ attitudes at any given moment impact the work place and as a result impact student achievement.

Positive Outcomes of Organizational Climate in Schools

People existing within an organization develop attitudes or feelings towards their jobs and their peers which affect their behaviors and actions. Research has found that the school administrator’s decisions and actions contribute to the “atmosphere” created within the school (Heck & Marcoulides, 1990). Thus, leadership actions have been found to be an important climate variable due to the fact that the leader’s actions can have an effect on teachers which in turn influences their motivation towards helping students (Mendel et al., 2002; Sweetland & Hoy, 2000). For example, a positive school climate has been associated with fewer discipline referrals for misbehavior, fewer emotional problems, and lower antisocial behavior from students (Kuperminc et al., 1997). A positive school climate has also been found to be correlated to students having an easier transition to a new school (Freiberg, 1999). In addition, a positive school climate is
partly associated with a teaching staff that is more willing to work with each other and help the students resulting in a more positive student body (Mendel et al., 2002).

Holt and Smith (2002) asserted that student achievement is influenced by the school climate, which in turn, is a direct result of the leadership within a building. Additionally, Chapman (1998) found that student achievement is higher in schools where teachers reported that their principals created an environment in which they were treated as professionals. Waters et al. (2003) and Heck et al. (1991) argue that a relationship exists between leadership and student achievement to such an extent that if a principal improved his or her leadership abilities, student achievement would also consequently increase as an indirect result. Therefore, if a principal creates an open and positive climate by treating the staff professionally and holding them accountable, those teachers will in turn do a better job of educating students and bringing higher performance as they are involved with the school and in the instructional decision making process (Heck et al., 1991).

Wallace and Weese (1995) and Yusof (1998) concluded that effective managers lead their programs with stronger organizational cultures and climates rather than highly directive leaders. Lam (2002) found that organizations with stronger cultures have a higher degree of group sharing, group norms and common beliefs. These team concepts (group sharing, group norms, and common beliefs) accounted for higher job satisfaction and teacher motivation (Bass, 1995). An increase in staff engagement and staff morale, are arguably necessary preconditions for the improvement of student achievement and test scores.
Kouzes and Posner (2002) claimed that it is important for schools to develop a school climate that supports: psychological hardiness (p. 221), learning (p. 309), safety (p. 226), and trust (p. 244). Hanson (2003) believed that it is also important to develop open school systems that understand the reasons for rational and influential decision-making to promote a positive and safe school climate. For instance, the principal can ask teachers to join decision-making teams that develop the school’s goals in order to build trust and a school vision. Once the teachers have buy-in and a sense of ownership, they will then trust the principal and become intrinsically motivated to work with other teachers and help students increase test scores. Based on the above research, this dissertation study examined teachers’ perceptions of climate and, in conjunction with the four other subsystems that together explain culture, how they predict school performance in middle schools and in K-8 schools.

Different Organizational Middle School Structures

During the second half of the nineteenth century, school systems in the United States were originally composed of nine year elementary schools (K-8) and four year high schools (9-12) (Manning, 2000). Since then, educators and researchers have spent over 80 years attempting to determine the most effective grade combination for the so called “middle grades”- sixth through ninth grade (Manning, 2000; Paglin & Fager, 1997). Clark and Clark (1993) believed that the middle level grade configuration issue has been the “longest running, most extensive educational reform movement in the United States” (p. 447). To make matters more complex, research has not developed and
conducted a definitive study with a clear direction for schools and districts to follow when establishing their grade configurations (Connolly et al., 2002). This study attempts to shed some light on which middle level structure in Southern California is outperforming the other by comparing K-8 and middle schools outcomes. It is hoped that this will also provide information in order for school leaders to make more informed decisions about which structure will best educate their young adolescents. It is evident that in the past, recommended structural changes to the school were primarily motivated by the most popular theory of how children learn and not based on quantitative or qualitative research about specific school characteristics. Proponents of a particular type of school structure (K-8, MS, junior high) each had their own theory (discussed below) as to why a particular type of school were more or less beneficial to students. This is clearly evident as there have been several types of middle level configurations in the United States (Arcia, 2007; Byrnes & Ruby, 2007; Connolly et al., 2002; Juvonen et al., 2004; Offenberg, 2001; Weiss, 2008; Weiss & Kipnes, 2006; Yecke, 2006).

Since the earliest days of publicly supported systems of education in the United States, teachers, educational scholars, school board members, and state-level policymakers have discussed and deliberated upon the question of how best to structure the education of students (Tyack & Cuban, 1995; Urban & Wagoner, Jr., 2004). Since the early nineteenth century, different groups of reform-oriented school officials have experimented with the development and utilization of different grade-level configurations. During the past twenty years, debate has continued to occur among
school leaders over which type of grade-level configuration is most effective in serving young adolescents (CDE, 2008).

Nationally, local education agencies (LEA) have utilized a variety of middle-grade configurations. For instance, according to the National Center for Education Statistics (NCES), there were a total of 11,521 K-4, K-5, and 6-8 grade schools and 4,740 K-8 schools in the United States in 1999-2000. By 2004-2005, there were 12,530 of the former schools and 5,743 of the latter schools (NCES, 2007, p.157). In the case of California, school districts also utilized a variety of middle-grade configurations, “although the sixth-through-eighth combination is most common” (CDE, 2008, p. 1). The California Department of Education (CDE) reported that in 2006 “sixty-five percent of the schools serving middle grades students were grade six through eight combinations.” Other common configurations utilized by California school districts include grades 7-8, 7-9, 6-9, 5-8, and K-8 (CDE, 2008, p.1). According to the CDE, there were 1,226 “middle schools” statewide in 2004-2005. Of these 1,226 middle schools, 802 utilized the grade six through eight combination (CDE Fact Book, 2006, p. 20). In addition, there were 602 K-8 schools in California in 2004-2005 (CDE Fact Book, 2006, p. 20).

In recent years, concerns not only about the institutional limitations of middle schools to foster student academic and social development but also the fiscal burdens arising from the “middle school” grade-level configuration have caused school district

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1 The next largest “middle school” grade-level configuration utilized by California school districts consists of the grade seven through eight combination (319 middles schools out of the 1,226 statewide; CDE Fact Book, 2006, p. 20).
officials to re-examine the option of utilizing a K-8 grade-level configuration. As a result, school officials have looked to the discourse on grade-level configuration to improve their decision-making processes. The public discourse over which grade-level configuration is most effective in serving young adolescents has been shaped during the past twenty years not only by the policy advocates for particular grade-level configurations but also by educational research which has presented a less than definitive answer as to which type of configuration is most effective. Policy advocates for the K-8 grade-level configuration emphasized “the value of more nurturing elementary school settings” in the fostering of student social and academic development (CDE, 2008). Middle school proponents emphasized “the [educational] value of specialized subject-matter teaching, electives, and more advanced facilities for [the] sciences, sports, and academic rigor” (CDE, 2008). Regardless of which middle school structure is used, research by Heck and Mahoe (2006) has shown that high schools need to develop a transition program for 9th graders. These researchers found that planned transition programs help students to succeed once in high school.

Along with different grade level configurations, the distinctive types of middle schools have set up unique physical layouts for their schools. For the most part, a common middle school is set up where each teacher has their own classroom and students travel to their assigned classes. Students at middle schools tend to have six classes that last about one hour each and they are given some time to travel from one class to the next. Depending on the middle school, school leaders try to separate the core classes (English, math, science, social science) into separate wings of the school so that teachers
that teach common courses are close to each other. This also helps to separate the students according to grade levels (Paglin & Fager, 1997). Students are separated in distinct wings during their core classes and then grade levels are mixed during their elective classes. There are also some middle schools that are self-contained classes that allow students to stay in one class and require teachers to travel to different classes (Yecke, 2005). At the middle school students tend to stay with their same grade level peers during the core classes and then mix with different grade levels during elective classes.

Paglin and Fager (1997) and Yecke (2005) have described different K-8 school structures that are common for most K-8 schools in the United States. One common structure for K-8 schools is to divide the school into two or three schools within the school. Depending on the physical layout of the school, K-8s are divided into two (K-5 and 6-8) or three schools (K-2, 2-5 and 6-8). For the most part, at both types of schools the K-5 grades are taught in a self-contained setting while the upper 6th–8th grades require students to travel to their assigned classes.

Nationally, as well as in California specifically, there has been a push to remove junior highs and educate students via the middle school and/or K-8 program. The next sections describe the pro and cons of the junior high, middle school, and K-8 programs and explain why most school districts in the last 20 years have decided to implement either a middle school or K-8 program. It is important to understand how and why the three programs were implemented in order to be able to explain possible differences in teacher culture perceptions that were the original intentions of the structural changes.
This dissertation study will focus on how the K-8 and middle school structures affect the organizational culture, and in turn how they affect the academic performance.

**Junior High School Program**

The junior high school (7-9) concept was designed and implemented as educators determined that there was a need for a separate school “that would be more responsive to the needs of young adolescents” (Clark & Clark, 1993). In the early 1900s, educators in the K-8 system were worried that the middle-grade students’ needs were not being met. Proponents of the junior high system argued that the K-8 system did not address the following types of middle-grade issues:

1. discipline, psychological, and developmental needs (Offenberg, 2001),
2. individual differences (Clark & Clark, 1993), and
3. high rate of school dropout and pupil retention (Clark & Clark, 1993).

As a result, the first junior high was opened in Columbus, Ohio in 1909 and was “conceived of as a preparation for high school and usually imitated the structure of one, with departmentalized classes and uniform daily class periods.” Several junior highs were opened soon afterwards (Paglin & Fager, 1997, p. 2).

Juvonen et al. (2004) stated that “the creation of separate schools for young adolescents has been guided primarily by [the] pragmatic concerns” (p. 18) of researchers and not based on data driven decisions. Researcher’s pragmatic concerns along with a “now-discredited theory of ‘brain periodization,’ which holds that ‘the brain virtually ceases to grow’ in children ages 12 to 14 and that teaching of complex material during
that period will have damaging effects,” led the push for junior high schools (Yecke, 2005, p. ii). Although researchers and educators used pragmatic concerns and an unproven ‘brain periodization’ theory to change the schooling for young adolescents, the junior high school curriculum and teaching strategies implemented were not effective. Instead of researching the best methods to help redress the problems of 6th, 7th, and 8th graders, educators simply created a separate school for them.

During the 1950s and 1960s the middle level configuration debate emerged once again as educators questioned whether “the junior high school actually served the needs and interests of young adolescents” (Manning, 2000, p. 192). Critics of the junior high school argued that junior high students were developmentally different than both their elementary and high school counterparts; therefore, treating junior high students as if they were high school students was not the best approach. Because junior high school structures were not developed through scientific research nor properly conceptualized, Clark and Clark (1993) determined that junior high schools had failed the students for the following reasons:

1. Junior highs tracked the students into ability level,
2. Teachers were specialized into a particular subject and not across subjects,
3. The counselors that were supposed to speak with students about their adolescent changes were overwhelmed and did not reach all students,
4. They were too similar to high schools in structure and in function, and
5. Many teachers in junior highs did not want to be there and preferred to be in a high school or elementary school so the teachers did not alter their instructional or classroom management methods for junior high students (p.450).
Juvonen et al. (2004) also added the following three reasons for the failure of junior high schools, namely: abrupt transition from elementary school at a difficult time in their lives; strict teacher centered instruction; and the increased practice of retaining students (p. 11).

The above mentioned issues caused several school districts and educational leaders to once again consider a change in middle-grade configuration. In fact, educators and researchers even began looking for a school configuration for middle grade students that did not mirror either the high school or the elementary school. Soon after, the middle school design was utilized to ensure that teachers and courses engaged and caught the young adolescent’s attention in order for their successful transition into high school.

Middle School Program

The original intention of the middle school was to make schools more developmentally appropriate for children and to have educators teach in a manner that best fit the adolescent stage (Weiss & Kipnes, 2006). Yecke (2005) defined the middle school concept as “…the belief that the purpose of schools is to create children imbued with egalitarian principles—in touch with their political, social, and psychological selves” (p. 2). Leading educators and psychologists at the time believed that moving the 9th graders to high school and the 6th graders to middle school would create a better developmental fit for the students. Teachers and administrators of middle school students were asked to change their teaching and disciplinary techniques in order to reach students in a manner that best fit the students’ psychological and cognitive levels. Middle schools were conceived as a way to keep the students’ interests and needs in mind in order to
motivate them to move on to high school. Paglin and Fager (1997) described this particular conceptualization of the middle school as follows:

The middle school was conceived as a more child-centered institution with “responsive practices” such as interdisciplinary team teaching, advisory programs, and flexible scheduling. The middle school also offers a more varied curriculum and more electives or exploratory classes than are usually available at junior high schools (p. 2).

Early middle school proponents asked for middle schools to develop team-teaching techniques and to place students in homerooms where a group of students had the same teachers and counselor for the entire school year. This small learning community approach allowed teachers to better know their students and to develop effective teaching methods across subjects (Lee & Smith, 1993, p. 166). A committee of middle level educators and scholars even developed the following middle school necessity check list to be required of a true middle school:

1. Educators that are knowledgeable and committed to helping young teens,
2. A curriculum based on the needs of the students,
3. A range of organizational management,
4. Varied instructional strategies,
5. A full exploratory program,
6. Comprehensive counseling,
7. Continuous progress for students,
8. Evaluation procedures compatible with the nature of young adolescents,
9. Cooperative team planning, and
As it turns out, these teaching techniques and recommendations also created a major problem for the middle school teachers who often held single subject credentials and were not well versed in student centered teaching strategies. As such, the middle-school concept was often not fully implemented (Carr, 2005).

While the junior high school program struggled because of the structural similarity to the high school, the middle school program faltered due to their teaching similarities to the high school. Teachers and administrators rarely practiced the teaching techniques recommended by educational researchers for middle school children, causing middle schools to imitate the junior and senior high school organization (Clark & Clark, 1993). Juvonen et al. (2004) found that core practices advocated in the middle school literature were commonly not being implemented. These core practices included: interdisciplinary team teaching, flexible scheduling, advisory program, and looping. Because middle schools were not implementing these teaching strategies at the school site level, the goal of helping young adolescent in the best theoretical manner possible had not been achieved.

Currently in the United States the middle school (6th through 8th grades) format appears to be considered the agreed upon model form because overall there are more middle schools than junior highs or K-8 schools. However, despite this fact, according to Weiss and Kipnes (2006) “…few educators and researchers would argue that middle schools represent the solution to the shortcomings of other forms” (Weiss & Kipnes, 2006, p. 240). Although researchers do not share a consensus on which middle level structure is best for students, they do agree that a transition between elementary and high
school is clearly necessary. Given these issues, this dissertation will also attempt to
determine whether and why one structure is outperforming the other in order to support
one type of middle level school over another. This matter will be examined keeping in
mind the biological, psychological, and social changes these young adolescent students
experience, which is the topic discussed in the next section.

Middle-Level Student Changes

There are various configurations of middle level schools because of the numerous
issues and changes that an adolescent faces; these issues are often not properly addressed
by schools. Steinberg (1989) and Clark and Clark (1993) found that the “primary
changes that take place in early adolescents are: biological/physical,
cognitive/psychological, and social” (p. 452). Puberty, higher level thinking, and the
development of new role formations with friends, family, and other adults are universal
changes that have caused problems in the education of these students. According to Hill
(1980), there are six psychosocial changes that early adolescents experience:

1. Attachment changes between parent and child,
2. Autonomy and independence in behavioral realms,
3. Sexuality is incorporated into behavior,
4. Intimacy is deepened at this age level,
5. Achievement and ambition become realistic for their future, and
6. Identity is transformed to accommodate changes and uniqueness (p. 5).
Indeed, various extreme psychosocial changes may cause a middle school student to succeed or fail at the middle school level. Accordingly, peer pressure from family, peer groups, school, as well as a student’s immediate environment determine how the student will be affected by the biological, psychological, social, and psychosocial changes (Hill, 1980).

Researchers believe that the aforementioned changes along with the transition from the elementary school to a middle school can create common but unwanted results at the middle school and junior high level (Blythe et al., 1978). For example, Juvonen et al. (2004) asserted that “separate elementary schools and middle schools cause transition problems for students that can negatively affect their developmental and academic progress” (p. 113). Thus, current research suggests that in order to avoid unwanted problems that students typically experience at a middle school or junior high, they should not transition from elementary to a middle level school before going into high school (Smith, 2006). K-8 proponents believe that students who are going through major transformations need their school to be a constant fixture and not another change in their life. Thus, along with comparing academic achievement, this dissertation will also examine teachers’ perceptions of the students at K-8 and middle schools in order to ascertain whether there is evidence to support or reject previous research on the potential negative effects that result when students transition to another school. In order to provide a complete overview of the issues, the next section explains the theory behind why negative outcomes are associated with junior highs and middle schools and provides some solutions that are apparently prevalent in K-8 schools.
Negative Outcomes of the Junior High and Middle Schools

Educational programs that house several young adolescents face numerous common problems that have yet to be resolved. A major issue surrounding the middle school and junior high school level are the large numbers of 6th, 7th, and 8th graders grouped together in one school (Look, 2005; Offenberg, 2001). This has caused a variety of problems mainly because placing too many middle grade students who are already experiencing the previously mentioned difficulties into one school may set that school up for failure, especially due to limitations pertaining to institutional capacity to redress such issues and concerns. This is concern was echoed by Schaarsmith (2005), who found an increase in behavioral issues measured in terms of middle and junior high schools when compared to K-8 schools as shown by a higher number of suspension rates in middle schools (Arcia, 2007).

Carr (2005) also found that middle school students experienced more peer pressure in middle schools than they do in elementary schools. An increase in peer pressure is positively correlated to behavioral issues as middle level students are surrounded by their same age peers and so attempt to influence each other while developing their own identity (e.g., the rebel, nerd, athletic, gangster, grunge, etc.). Weiss (2008) also found that middle school students who experienced lower levels of self-esteem are more subject to both real and perceived threats in school than their K-8 counterparts. Because K-8 schools have a tendency to have fewer 6th-8th grade students
at the school site, the level and significance of peer pressure, threats, and behavioral issues tend to decrease (Lee & Smith, 1992).

To make matters worse at the middle school level, Look (2005) and Offenberg (2001) found that junior high and middle schools often do not have enough counselors or advisors to help students through this difficult period of adolescence. It seems that students are too often left to fend for themselves as research has also found that teacher/student/parent relationships are lost or minimized at the middle school level (Connolly et al., 2002; Offenberg, 2001). These minimized relationships become more evident as parents have reported that school personnel provide them less information about their child and that they attend fewer middle school conferences (Juvonen et al., 2004). As students now have more than one teacher per day, it becomes additionally difficult for relationships to form and for teachers to understand the student’s preferred learning methods. It also becomes more difficult for teachers to contact parents, as middle school teachers are often in charge of over 100 students per day compared to 30 students at the elementary level. Without proper guidance from a teacher or counselor these students often become more vulnerable to peer-pressure and the media messages, which subsequently can cause the middle school students to grow up too fast (Pardini, 2002).

Another common finding in middle school-grade research is that students who attended middle or junior high schools can experience greater achievement loss when transferring to high school than do students who attend K-8 schools (Alspaugh, 1998; Offenberg, 2001). Simmons and Blyth (1987) argue that middle level students
experience problems with school transitions as they are also experiencing puberty. Simmons and Blyth (1987) concluded that “…the timing of the transition to a new school environment has a negative impact on a student’s sense of self-worth and personal efficacy, which then has a negative impact on a student’s academic motivation that is evidenced in measureable outcomes” (Becker et al., 2009, p. 16). Smith (2006) and Offenberg (2001) also found that transitioning students are more likely to dropout from school. Students from middle school or junior highs may not succeed as well in high school, having learned bad habits during the middle grade years. As students coming from junior high and middle schools tend to not only experience higher discipline problems and peer pressure but also less guidance from counselors and less parental support, it is a logical assumption that these students can experience greater achievement loss when they transition to a high school.

The Third International Mathematics and Science Study (TIMSS) has found a sharp decline in math and science scores for students in the United States, particularly when they are rated in the fourth grade and then later in the eighth grade. Yecke (2005) found that the TIMSS report actually presented a 22 point decline in math scores and a 37 point decline in science scores between fourth and eighth grade. It seems clear that there is a problem in the education of students between the fifth and eighth grade in the United States (Yecke, 2005). Educators have placed the blame on the junior high and middle schools, as the transition from elementary to a middle level school may be too much for many students to handle. This is evidenced as grades and test scores are affected in a negative manner.
In an attempt to solve these myriad of issues, some U.S. public school districts in the last decade have once again changed middle level configurations that house only sixth and seventh graders, or only house seventh and eighth graders to a different model, with most school districts switching to the kindergarten to eighth (K-8) grade configuration (CDE, 2007; Coladarci & Hancock, 2003; Education World, 1999; Howley, 2002; Look, 2002). Common problems that have been found in junior high and middle schools range from psychological issues, psychosocial issues, and organizational issues that may be handled more effectively at a K-8 school. This shift in school structure has been described by Weiss and Kipnes (2006) who state that, “...in large part due to these findings and perceptions of middle schools’ harmful effects, numerous districts across the United States have begun to eliminate their middle schools, changing their systems of education for middle grades students to other usually smaller, schooling forms” (Weiss & Kipnes, 2006, p. 240). According to Elovitz (2007), these districts transitioning to the K-8 model have even gained media attention across the country.

As discussed earlier, extant research both support and refute these negative claims of middle schools as some research has suggested that “...these academic advantages are not the product of a particular grade configuration or even a delay in transition to secondary educational organizations but rather are attributable to higher levels of student self-esteem and sense of personal efficacy fostered by efficacious adult-student relationships in a K-8 environment” (Becker, Gomez, & Zykowski, 2009, p. 4). Because this dissertation study will be the first to focus on K-8 and middle schools in Southern California, it is important to note the positive and negative findings by other scholars as a
guiding basis for this research. By examining these matters it is hoped that this dissertation study will shed more light on the K-8 versus middle school debate.

K-8 Program

Hough (2005) coined the term ‘elemiddle’ for describing K-8 schools. According to Hough (2005), such schools “configured with continuous grade spans that begin with kindergarten or pre-kindergarten and end after the 8th grade in which the upper grade spans are implementing middle-level best practices should be labeled elemiddle” (Hough, 2005; p. 1). Recent quantitative and qualitative research has found several positive effects of K-8 programs that function as elemiddles. These positive effects may be a reason that K-8 school configurations are under consideration or have been implemented in Philadelphia, Baltimore, Boston, Cincinnati, Cleveland, Denver, Detroit, Harrisburg, Hartford, Palm Beach, and Phoenix (Connolly et al., 2002). Indeed, it would appear that parents, researchers, administrators, and school board members seem to have been persuaded by some of the positive research published on the elemiddle concept. Even the California Teachers Association has reported that several districts in California (San Diego, Bassett, and Long Beach) have considered moving to the K-8 approach (2006). Thus, it is evident that elemiddles have recently re-emerged in an attempt to address the problematic issues and concerns that have troubled middle level teachers and researchers for decades.

Elemiddles are also supported by parents because K-8 schools are seen as communities and not institutions and because a number of important positive aspects
have been highlighted in support of K-8 schools. First, parents are able to establish and maintain longer relationships with educators in K-8 schools. This is due to the fact that they are connected to the school that their child attends for a longer period of time, and the high probability that their other children attend the same school (Connolly et al., 2002; Juvonen et al., 2004; Offenberg, 2001). Second, students tend to have fewer discipline problems in elemiddles because students know that their parents are more likely to visit or call their teacher if there is a problem (Weiss & Kipnes, 2006). In addition, the behavior of older siblings has been found to influence younger siblings. Fourth, students in K-8 present greater levels of leadership and lower levels of peer victimization (Offenberg, 2001). As a result, Education World (1999) found that K-8 programs have provided the opportunity for older students to be role models for younger students as they may go to school with several of their younger siblings, relatives, and neighbors. The Ashanti proverb, “It takes a whole village to raise a child” appropriately defines the concept of elemiddles. As declared by Becker et al. (2009), K-8 schools are particularly advantageous organizations “…because of the perceived quality of the relationships that they foster” (p. 42).

As K-8 schools remain typically smaller in size than middle schools, staff members also feel more connected to the community as the school draws on a smaller geographical area (Lee & Smith, 1993). This allows teachers and administrators to maintain relationships with students and families over an extended period of time (Education World, 1999). In Milwaukee, for example, there is a push from parents for K-8 schools who preferred the family-oriented atmosphere that may be found in K-8
schools. As a result, elemiddles are growing quickly in that district (Carr, 2005). This familial-type of community creates a sense of belonging where the parents, teachers, and students respect the school and each other in order to build a positive working relationship. In addition, Yakimowski and Connolly (2001) found that parents and students viewed K-8 schools as better and cleaner when compared to responses by students and parents who attended middle schools.

Hough (2005) found that K-8 schools consistently produced the most desirable results because the elemiddles implement more of the elements of the middle-level grade concepts as outlined by the National Middle School Association (NMSA) (1987) than do middle schools. Schaarsmith (2005) and Look (2002) claimed this occurs because teachers with elementary training are more willing than middle level teachers to work in teams, collaborate, try different strategies, and attend conferences. Within schools, the K-8 system also increased internal accountability for schools because teachers know where their students are coming from and where they are going the following year (Look, 2002). As an administrator and as a teacher at the school site it would not be difficult to determine which teacher is not meeting the school standards regarding test scores and resolving discipline issues. Teachers who write several referrals from a class of students that did not have any recorded discipline problems the previous year may raise concerns. Once the teacher has been identified as experiencing discipline problems with students in the class, the teacher and administrators can work together in order to help that teacher improve his or her teaching strategies.
Furthermore, it is easier to fill vacancies in K-8 schools that are allowed to hire teachers with either multiple subject or single subject credentials, unlike middle schools which are required to hire teachers with single subject credentials (Look, 2002). This opens the door to hiring more elementary level teachers that prefer student-centered environments and are more open to student developmental changes (Hough, 2005).

In regard to the current No Child Left Behind Act, it is important to note that elemiddles have also provided positive results on student exams, grades, attendance, and self-esteem (Lee & Smith, 1993; Offenberg, 2001). Elemiddle students also had higher participation rates in extracurricular activities, demonstrated greater leadership, experienced less victimization, had higher self-esteem, were less likely to be threatened by other students, and viewed teachers as more humanistic (Simmons & Blythe, 1987; Weiss & Kipnes, 2006). The higher self-esteem experienced by students in elemiddle schools creates a safer school environment with less peer victimization, student role models, and students that respect themselves and each other (Offenberg, 2001). This is evident as Yecke (2005) found that the K-8 students tend to hold off on sexual tendencies when compared to middle school students. K-8 schools enroll and teach fewer middle level students, lowering the density of these students and increasing the opportunity for teacher-teacher, teacher-student, and teacher-parent interactions. Because there are fewer middle level children at the school undergoing puberty and developmental changes, this reduces the amount of peer pressure, threats, unproductive behavior, students with low grades, and suspensions (Arcia, 2007; Klump, 2006; Weiss & Kipnes, 2006).
Carr (2005), Offenberg (2001), and Yakimowski and Connolly (2001) found that students in K-8 schools performed better than middle school students on exams at the end of 8th and 9th grade. These researchers claimed that K-8 schools tend to have higher performance scores than middle schools after the eighth grade and thus believe K-8s are more effective and efficient grade configurations. Simmons and Blythe (1987) also found students that attended K-8 fared better with their academic grades in high school. Gronna’s (1998) research similarly found that students in K-8 schools fared much better than students who were in K-6 or K-5 schools and, more importantly, determined that student achievement declined immediately after their year of transition regardless of the school type. Jones et al. (1984) in Gronna (1998) suggested “that transition had a negative impact on students’ academic achievement, regardless of the grade of transition” (p. 34). Simmons and Blyth (1987) argued that middle level students have problems with transitions as they are developing through puberty and Offenberg (2001) found that transitioning students do not do as well in high school if they come from a middle school or junior high compared to K-8 students. Additionally, Offenberg (2001) and Alspaugh (1998) found that middle school and junior high school students experienced greater achievement loss when transferring to high school than K-8 students who transferred to high school. Finally, to add the so-called cherry on top of the elemiddle cake, school districts have reported that K-8 and K-12 schools are cheaper to open and maintain. In order to maximize savings and to benefit from the positive attributes mentioned above, many districts are thinking of making the switch to the K-8 program (Coladarci & Hancock, 2003; Howley, 2002).
Although these findings seem compelling, it must be remembered that K-8s are not the silver bullet for middle level students and that research focusing on predictors of school success have also found faults with the elemiddle program (Anfara & Buehler, 2005; Viadero, 2006). For example, Erb (2006) found that organizational health and effective leadership were better predictors to student success than grade structure because the staff and leadership with strong organizational health and leadership tend to believe in the new reforms and place more of an effort to help the students. It is important to note, however, that those student-teacher, teacher-teacher, and teacher-administrator relationships could be reproduced and sustained in any school model, although they might be easier to produce in a K-8 setting (Becker et al., 2009). Becker et al. (2009) and other researchers also found structural and educational disadvantages within the K-8 schools. The next section considers in detail the pros and cons of each type of middle level school.

Negative Outcomes of K-8 Schools

The literature from about 10 years ago tends to provide positive results for the elemiddle programs. However, current research within the last five years has found some potential problems regarding the elemiddle programs. For example, in terms of funding, because K-8’s have been known to be cheaper to manage than the K-5 plus middle schools, the K-8s are typically funded lower at the 6th – 8th grade years when compared to a middle school (Look, 2002). This has resulted in less support from the districts (counselors, school resource officers, administrators, etc.) for these students, who have
different needs, than elementary students. Also, because there is less money available in the K-8s, these schools may not have as many appropriately trained counselors or advisors trained in middle level issues to help these students through the difficult times and changes they are experiencing (Schaarsmith, 2005).

Another problem found in K-8 programs is that K-8 schools may have minimal or no courses in such subjects as Algebra 1 or foreign language (Yakimowski & Connolly, 2001). This is a problem because students who are interested in going on to college should take Algebra 1 or Geometry in the eighth grade along with a foreign language. Not providing these classes holds the students back and may eventually disadvantage students when they transition to high school. Carr (2005) also found that elemiddles did not provide as many electives as a middle school. This raises a concern as middle schools were created with the intention of providing different classes and electives that would keep the students interested in school and motivated to learn.

Some teachers in the elemiddles have also complained about their lack of consistent teaching schedules. Because of the many grades in the K-8 schools, teachers are asked to present more than one subject at different grade levels and are typically not given the chance to focus on any one class (Carr, 2005; Schaarsmith, 2005). This may be a problem as the teacher may not be trained or qualified in all of the subjects they are asked to teach. Juvonen et al. (2004) found that there is a high percentage of 5th thru 8th grade teachers that are not teaching in their specialization and that several teachers may not even have minors in the area that they are teaching. Juvonen et al. (2004) believe that this has caused the teachers in middle schools, junior highs, and grades 6-8 in K-8
school to have lower retention rates when compared to elementary and high school teacher retention rates. A strong teaching staff willing to teach different subjects and open to change is mandatory at a K-8 school. Given the above mentioned issues, this dissertation study measures teachers’ perceptions of their school structure in order to determine if middle school or K-8 teachers are content with their work environment. This is a particularly important concern as the Heck and Marcoulides model has demonstrated that teacher attitudes about their environment have been positively correlated to school performance.

Do K-8s Always Outperform Middle Schools?

Research has found that not all K-8 schools outperformed middle and junior high schools (Whitley et al., 2006; William et al., 2010). As a result, it is difficult to decide which school type is really outperforming another because although previous research indicates that K-8s tend to outperform middle schools, some of the current research that is being published suggests otherwise. Nevertheless, using seemingly more advanced statistical techniques, Weiss (2008) was able to discredit some of Offenberg’s (2001) conclusions about the differences between school structures. As stated by Weiss (2008), “surprisingly, our conclusions indicated few significant differences between students’ eighth-grade outcomes by the type of school attended” (Weiss, 2008, p. 60). What Weiss (2008) did find was significant differences between K-8 students with regards to higher self-esteem and were less likely to be threatened by peers. However, no achievement differences were found between school structures.
Other recent research on K-8s compared to middle schools have reached similar conclusions. For example, Viadero (2006) and Balfanz et al. (2002) found some middle schools in Philadelphia that performed better than elemiddles (K-8) and that these schools would not benefit from shifting into a K-8 system. In Canada, Whitley et al. (2007) found that there were no significant differences between achievements in K-8 versus middle school configurations. Byrnes & Ruby (2007) found that only older established K-8 schools tended to have higher student achievement scores than the more newly developed K-8 schools and all middle schools. This may be a result of the older K-8 schools having more experience as well as more respect and confidence from the communities that surround the schools. These researchers concluded that the higher achievement by these K-8 students “was almost completely attributable to the relative affluence of the communities in which the old K-8 schools were located” (Becker et al., 2009, p. 19).

Because of the lack of consensus, Viadero (2008) and Weiss (2008) stated that the middle grade configuration is still an unsettled matter; however, K-8 school systems may be a positive step. Balfanz et al. (2002) concluded that “by itself, however, K-8 conversion is not a strong enough reform. It needs to be a part of a comprehensive reform plan for the middle grades” (p. 1). Lee & Smith (1993) found that regardless of the type of school, schools with a smaller proportion of eighth graders demonstrated higher achievement.

Evidently K-8 and middle schools that implement research proven programs with a dedicated staff will see a rise in achievement scores because “efficacious adult-student
relationships could logically be produced and sustained in any school organizational environment” (Becker et al., 2009, p. 4). As suggested by Becker et al. (2009), school districts in California that are in Program Improvement status but have willing teachers may find that either a K-8 or middle school structure can help their scores to improve. They state the following:

The literature suggests that K-8 schools do seem to offer some degree of both academic and social psychological benefits for their students. The academic benefits, however, are extremely small after the effects of family and student characteristics are accounted for in statistical models. The social psychological benefits, on the other hand, have been easier to replicate and are larger than the academic. (Becker et al., 2009, p. 20).

As a result, when all things were equal (SES, culture, leadership, staff, etc.), K-8 schools tended to outperform middle schools due to the social psychological benefits of the K-8 structure. However, when unequal, Simmons and Blyth (1987) concluded that there were certain school characteristics (private schools, religious schools, and high SES schools) that predicted student academic success more than school structure.

As a result of the few studies regarding comparisons between K-8 and middle schools in Southern California, this research will focus on studies of culture and performance of middle school aged students. Such a comparison is necessary to understand the link between the cultural components of K-8s and middle schools as well as their performance in order to attempt to apply new strategies in schools that are under performing. Previous school effectiveness research has found that most actions by school principals had at least an indirect effect upon school performance. Heck et al. (1990) and Bossert et al. (1982) claimed that principals who spent time developing the school’s culture and climate improved their school’s performance. Thus, this dissertation study
will examine the cultural components of both K-8 and middle schools in order to begin to understand the cultural differences between each type of school and how the performance of each approach can be explained.

School Effectiveness Research and Culture

The issue of school effectiveness is crucial in today’s schools, as federal law in the form of the No Child Left Behind Act (NCLB) mandates that all children will have to succeed in standardized tests by a pre-established deadline (2014). NCLB calls for the reexamining of leadership approaches, and research by Marcoulides and Heck (1993b) and Bossert et al. (1982) have found that the link between principal’s actions and school outcomes are more indirect than direct. Heck and Marcoulides (1992) stated that principals do not cause a direct change in student achievement; however, principal leadership is a necessary condition to increase student achievement. According to Heck, Larsen and Marcoulides (1990), principals who spend time developing and changing the governance, school climate, and instructional organization of a school will have a better chance of increasing student achievement on state tests. Thus, school effectiveness is affected by several different organizational variables, including grade structure (Heck, 2000). Thus, two variables that must be discussed in more detail because of their importance to student achievement are school organizational grade structure (governance) and school culture.

Schein’s (1992) ecology concept and Parson’s (1967) technical and managerial concepts both explain the impact that school structures can have on student achievement.
The physical layout and grade structure of the school explains the staff’s mission and educational philosophy. For example, a school district may decide to become a K-8 district in order to: create a more connected school community; have more parent involvement; and/or have fewer student transitions in order to raise achievement. Also, at a time when young adolescent students need consistency, constancy, and control (Paredes, 1990), a K-8 configuration creates a grade structure where students do not have to transition until high school. Thus, the physical and managerial characteristics that are created because of the K-8 configuration send a strong message to the stakeholders in an organization about what the administration and staff find educationally important.

Although, as highlighted earlier not all K-8 schools outperform middle schools, the K-8 structure brings a community-type mentality that has been tied to several positive outcomes when compared to middle schools (Becker et al., 2009). Components of K-8 schools (lack of transitions, collaborative staff, and higher student achievement) create a type of culture that can affect school achievement. Because of the importance of culture and its effect on student achievement, researchers have created several culture definitions and measurement surveys.

Because of the broad number of definitions and multiple factors that have been utilized to define school culture, “there is little consensus about how these processes all fit together to determine levels of outcomes” and how climate helps to explain culture (Marcoulides et al., 1996, p. 141). However, most researchers agree that “culture” (whatever the conceptualization) does have an effect on student achievement regardless of which definitional model of culture was utilized for a particular study. In particular,
safer schools and positive school climates tended to perform higher than unsafe schools with negative school climate (Kimweli & Anderman, 1997). The concept of “climate” is important for this dissertation research because, according to Heck and Marcoulides (1996b), it is one of the five components that create an organization’s culture. Consequently, this dissertation will also examine the direct and indirect effects of cultural components on student achievement.

Hypotheses

This dissertation study will address a number of directional hypotheses. The directional hypotheses were constructed based on previous research and literature review regarding K-8 and middle schools. In particular, the following directional hypotheses will be tested:

1. K-8 students will have higher levels of achievement as evidenced by their CST test scores than MS students in 6th grade.

2. K-8 students will have higher levels of achievement as evidenced by their CST test scores than MS students in 8th grade.

3. The Heck and Marcoulides (1996) model will fit well with data from both K-8 and MS teachers.

4. The magnitude of the direct and indirect effects in the Heck and Marcoulides (1996) will be different for K-8 versus MS teachers leading to the following sub-hypotheses:

   A. At K-8 schools, increased levels of collaboration, innovation and participation in decision making will lead to increased levels of teacher socialization and collegiality and result in higher school performance.
B. At K-8 schools, increased levels of collaboration, innovation and participation in decision making will lead to higher levels of teacher attitudes and result in higher school performance.

C. At K-8 schools, increased levels of social relationships, communication, and collegiality will lead to higher levels of teacher positive attitudes about their students and parents which will result in higher school performance.

D. At K-8 schools, increased levels of collaboration, encouragement for innovation, and participation in decision making will be associated in more available resources and higher responsive principal actions which will result in higher school performance because the teachers will have the available resources and collaboration time to better help their students.

E. At middle schools, higher levels of perceived bureaucracy and more directives from administration will be associated with lower organizational climate as teachers will not socialize or communicate positively nor collaborate amongst each other which will result in lower school performance.
Chapter 4
Study Design and Methodology

Sample

Ten different school districts in the Los Angeles, San Bernardino and San Diego counties were contacted and asked to participate in the study. The school districts were chosen for participation in this study based on the following criteria:

1. Have K-8 and/or middle schools within the district,
2. Higher than 60% free and reduced lunch as a district,
3. Higher than 20% of English Language Learners as a district, and
4. Parent Education Level greater than 1.90 and less than 2.90 as a district (High school graduate but less than college graduate)

The school districts that fit into this category and permitted data to be collected from their school sites were the following: Colton Unified School District (USD), Fontana USD, Hacienda La Puente USD, Paramount USD, and San Diego USD. Teachers were surveyed from a total of 17 K-8’s and 42 from middle schools. The details for each district according to the criteria used for participation in the study are provided in Table 4.1.
Table 4.1: School District Information

<table>
<thead>
<tr>
<th>School District</th>
<th># of K-8 Schools</th>
<th># of Middle Schools</th>
<th>% Reduced Lunch</th>
<th>% ELL</th>
<th>Parent Education Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colton</td>
<td>0</td>
<td>4</td>
<td>68%</td>
<td>27%</td>
<td>2.34</td>
</tr>
<tr>
<td>Fontana</td>
<td>0</td>
<td>7</td>
<td>76%</td>
<td>42%</td>
<td>2.24</td>
</tr>
<tr>
<td>Hacienda La Puente</td>
<td>4</td>
<td>6</td>
<td>69%</td>
<td>22%</td>
<td>2.38</td>
</tr>
<tr>
<td>Paramount</td>
<td>2</td>
<td>1</td>
<td>88%</td>
<td>37%</td>
<td>1.92</td>
</tr>
<tr>
<td>San Diego</td>
<td>11</td>
<td>24</td>
<td>60%</td>
<td>28%</td>
<td>2.89</td>
</tr>
</tbody>
</table>

Although a number of other school districts were also contacted because they had K-8 and middle schools and fit the above participation requirements, they did not provide permission for data to be collected from their schools. These included the following school districts: San Bernardino USD, Alhambra USD, Long Beach USD, Hemet USD, and Inglewood USD.

All data confirming the district and schools’ SES measured by percentage on free and reduced lunch, population, and CST scale scores were taken from the California Department of Education (www.cde.ca.gov) website in the DataQuest feature. All schools with similar SES levels (measured by percent of free and reduced lunch) and similar percentage of ELL students were surveyed in order to reduce the difference in
student performance that is explained by those two variables. All teachers from each school site participating in the study were contacted to participate in the study in order to understand their perceptions of the school’s culture using the survey instrument originally created by Heck and Marcoulides (1996b). This eligible sample resulted in a total of 606 potential K-8 teachers and 1,804 potential middle school teachers that were asked to complete the survey instrument. District officials and school administrators were contacted in order to gain access to educators that teach at each targeted school level configuration. There were a total of 628 teachers that filled out the survey, 154 K8 teachers and 474 middle school teachers.

Instrumentation

In an attempt to describe school achievement through organizational culture, Heck and Marcoulides (1996b) developed a survey instrument called: The Organization of the School and Teacher Satisfaction with Their Work Environment: A Survey of Secondary School Teachers in Singapore (OSTSWE) (See Appendix A). The OSTSWE was created by Heck and Marcoulides (1996b) based on research results first conducted by Marcoulides and Heck (1993a). Marcoulides and Heck (1993a) originally proposed and tested a model of organizational culture and how it can make a difference in for-profit organizational productivity. In order to determine the construct validity of the Marcoulides and Heck (1993a) model as originally conceptualized in an educational environment, these researchers subsequently created the OSTSWE survey with five factors that attempted to measure the three aforementioned interrelated subsystems and examine how student
performance can be explained by organizational culture. The original model is depicted in Figure 2.1 and is described by Heck and Marcoulides (1996a),

“The proposed model specifies five factors that together comprise visible aspects of organizational culture and, in concert, influence organizational performance. In this specific case, the outcome of interest is school performance, measured on a national standardized test of reading and math (Heck & Marcoulides, 1996b, p. 80)”.

Accordingly, the OSTSWE “was designed to measure 42 strategic interactions between principals and teachers, focusing on how the school is structured and governed, how it is organized instructionally, and how teachers perceive elements of its culture and climate” (Heck & Marcoulides, 1996b, p. 84). Some specific changes and modifications were made to the original OSTSWE survey in order to ensure that every observed variable had at least three comments that loaded onto the factor (R.H. Heck, personal communication, July 6, 2008 - see Appendix A). This version of the OSTSWE survey is now comprised of 46 comments that teachers rate on a five-point Likert-type scale: ranging from highly inaccurate to highly accurate (See Appendix B). To ensure the appropriateness of the survey for this study, it was piloted on middle school teachers, high school teachers, and secondary administrators. The survey took this pilot team approximately 10-25 minutes to complete and only minor grammatical revisions based on their comments were required.

In the OSTSWE, the first important cultural subsystem (the sociocultural subsystem) is measured by the following two factors: organizational structure and managerial processes. Organizational structure is intended to measure the attitudes and beliefs related to the organization’s structure and operational processes implemented to
achieve desired results. Organizational structure is measured by one scale: level of bureaucracy and this scale is measured utilizing five questions on the survey instrument. Low scores for organizational structure are associated with less rigidity and more teacher autonomy. The second factor, managerial processes, is intended to measure how the organization functions over time as a result of its particular structure, purposes, value and belief systems, and is measured by three questions on the OSTSWE: availability of resources (measured by three questions on the survey instrument), administrative responsiveness (measured by four questions on the survey instrument), and principal’s leadership (measured by six questions on the survey instrument).

The second important component of culture, the organizational value subsystem, is measured by the following factors: organizational values and organizational climate. The organizational values factor is intended to measure principles, ideologies, and activities representing values thought to be important in achieving school productivity. On the OSTSWE, organizational values is measured by three scales: time for teacher collaboration and meetings among teachers (measured by three questions on the survey); support for innovation (measured by three questions on the survey); and encouragement for teacher participation in decision making (measured by three questions on the survey instrument). The second factor, organizational climate, is intended to measure teachers’ perceptions of “how things are” on a day-to-day basis regarding a variety of topics. Organizational climate is measured by three questions: willingness to socialize with staff (measured by six questions on the survey), open staff communication (measured by three
questions on the survey), and teacher collegiality and the availability of help (measured by four questions on the survey).

The third important component of culture, the individual belief subsystem, is composed of teacher attitudes. The teacher attitudes factor is measured within the areas of classroom instruction, student academic ability, and student background. On the OSTSWE, teacher attitudes is measured by two scales: perceptions about students’ capabilities to learn academic material and the attitudes they bring from home (measured by three question on the survey), and teacher perceptions of the parents’ support of their child, the teacher, and the school (measured by three questions on the survey).

Finally, school performance (which is also the dependent variable), describes the level of academic performance within the school, and was measured in this dissertation study by the CST 8th grade mean scale scores of students obtained in English Language Arts (ELA), Algebra 1, Science and History for the 2009 school year.

According to Heck and Marcoulides (1996b), the OSTSWE has shown good internal consistency measures with most alpha scores close to or above the commonly suggested level of 0.7. The conceptual model has shown construct validity as determined by previous good model fit “…and suggest that at least some aspects of an organization’s culture are predictive of its relative performance on a variety of valued outcomes” (p. 90). Measures of model fit determined for the Heck and Marcoulides (1996b) proposed model’s school culture and performance research all indicated good model fit.

It is commonly accepted that individually evaluated values of the Comparative Fit Index (CFI), the Goodness of Fit Index (GFI) and the Normed Fit Index (NFI) above 0.95
suggest a good model fit (Raykov & Marcoulides, 2006). These measures can be loosely thought of as indicating the amount of variance explained by the examined model. In contrast, the Root Mean Square Residual (RMR) is a measure of the average unexplained variances and covariance’s in the model and a value close or less than 0.05 suggests a good model fit. Because the OSTSWE has shown good model fit with acceptable psychometric properties of reliability and validity, for purposes of this dissertation study it is assumed that the proposed conceptual model can be appropriately applied to determine the similarities and differences of culture and performance in K-8 and middle schools.

Theoretical and Statistical Model Examined

Figure 4.1 presents the complete structural equation modeling (SEM) path diagram originally proposed by Marcoulides and Heck (1993a) and Heck and Marcoulides (1996b). As can be seen by examining the model displayed in Figure 4.1, it contains two so-called exogenous ($\xi_1$-$\xi_2$) latent variables and four so-called endogenous ($\eta_1$-$\eta_4$) latent variables that together depict a theorized relationship between all the latent variables and school performance. In this figure the ellipses represent latent variables whereas the rectangles correspond to observed variables (which for simplicity can be thought of as the questions specifically included on the OSTSWE survey). Each latent variable (as designated by the arrows that point from either the endogenous or exogenous latent constructs to the rectangular observed variables) is measured by specific observed variables. In addition, and due to the presence of measurement error, each observed
variable includes this error, which is designated by the Greek lower case letter delta (δ). Thus, as can be seen in Figure 4.1, the two exogenous variables contain fourteen observed variables (x₁ - x₁₄) and their corresponding fourteen measurement errors (δ₁ - δ₁₄). The four endogenous factors are indicated by thirty-six y observed variables (y₁ - y₃₆) and their corresponding measurement error (ε₁ - ε₃₆). Finally, each endogenous latent variable also has a unique residual term (ζ₁ - ζ₄), which corresponds to the amount of variance in the construct not explained by the model (Diamantopoulos & Siguaw, 2007).

Figure 4.1: The Proposed SEM Model
The above displayed SEM path diagram can also be presented in equation form using standard LISREL notation. Accordingly, the model can be represented by equations in the following manner:

**Structural Equations for Latent Variables**

\[
\begin{align*}
\eta_1 &= \gamma_{11} \xi_1 + \gamma_{12} \xi_2 + \zeta_1 \\
\eta_2 &= \beta_{21} \eta_1 + \beta_{23} \eta_3 + \gamma_{21} \xi_1 + \gamma_{22} \xi_2 + \zeta_2 \\
\eta_3 &= \gamma_{31} \xi_1 + \gamma_{32} \xi_2 + \zeta_3 \\
\eta_4 &= \beta_{41} \eta_1 + \beta_{42} \eta_2 + \beta_{43} \eta_3 + \zeta_4
\end{align*}
\]

where:

- \( \gamma_{ij} \) represents the path coefficient of the \( i \) endogenous factor loading on the \( j \) exogenous factor, and
- \( \beta_{jj} \) represents the path coefficient of the \( j \) endogenous factor loading on the \( j \) endogenous factor.

The remaining measurement equations for each of the endogenous and exogenous latent variables included in Figure 4.1 are provided in Tables 4.4 and 4.5. In Table 4.4, the following notational scheme is used:

- \( y_i \) corresponds to the observed variable,
- \( \lambda_{ij} \) corresponds to the path coefficient or so-called factor loading,
- \( \eta_i \) corresponds to the endogenous latent variable, and
- \( \varepsilon_i \) corresponds to the error term associated with each observed \( y_i \).
Finally, in Table 4.5, the following notational scheme is used:

\[ x_i \] corresponds to the observed variable,

\[ \lambda_{ij} \] corresponds to the path coefficient or so-called factor loading,

\[ \xi_i \] corresponds to the exogenous latent variable, and

\[ \delta \] corresponds to the error term associated with the observed variable \( x_i \).

Table 4.3: Measurement Equations for Exogenous Variables

<table>
<thead>
<tr>
<th>Organizational Structure</th>
<th>Organizational Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureaucracy</td>
<td>Time</td>
</tr>
<tr>
<td>( x_1 = \lambda_{11} \xi_1 + \delta_1 )</td>
<td>( x_6 = \lambda_{62} \xi_2 + \delta_6 )</td>
</tr>
</tbody>
</table>
Using the above equations, the theoretical model can be translated into a mathematical model composed of two parts: the measurement model and the structural model. The measurement model specifies the relationships between the observed variables (the rectangles) and the latent variables (the ellipses) where the relationships are determined a priori based upon the theoretical model proposed. The structural model specifies according to the theoretical model proposed the various intercorrelations and direct effects among the latent variables. As indicated by Marcoulides and Heck (1993a), the relationships between all of the observed and latent variables are considered confirmatory as “ambiguity and complexity should be reduced by allowing previous theory to guide the definition of variables to be included in the model” (Marcoulides & Heck, 1993a). Because the purpose of this dissertation study was to replicate an a priori proposed model at the K-8 and middle school level, the relationships were simply evaluated in a confirmatory manner in terms of their degree of fit (see Chapter 5 for further details).

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Participate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$x_2 = \lambda_{21}\xi_1 + \delta_2$</td>
<td>$x_{12} = \lambda_{12}\xi_2 + \delta_{12}$</td>
</tr>
<tr>
<td>$x_3 = \lambda_{31}\xi_1 + \delta_3$</td>
<td>$x_{13} = \lambda_{13}\xi_2 + \delta_{13}$</td>
</tr>
<tr>
<td>$x_4 = \lambda_{41}\xi_1 + \delta_4$</td>
<td>$x_{14} = \lambda_{14}\xi_2 + \delta_{14}$</td>
</tr>
<tr>
<td>$x_5 = \lambda_{51}\xi_1 + \delta_5$</td>
<td>$x_{7} = \lambda_{72}\xi_2 + \delta_{7}$</td>
</tr>
<tr>
<td>$x_6 = \lambda_{62}\xi_2 + \delta_{6}$</td>
<td>$x_{8} = \lambda_{82}\xi_2 + \delta_{8}$</td>
</tr>
<tr>
<td>$x_7 = \lambda_{72}\xi_2 + \delta_{7}$</td>
<td>$x_{9} = \lambda_{92}\xi_2 + \delta_{9}$</td>
</tr>
<tr>
<td>$x_8 = \lambda_{82}\xi_2 + \delta_{8}$</td>
<td>$x_{10} = \lambda_{10}\xi_2 + \delta_{10}$</td>
</tr>
<tr>
<td>$x_9 = \lambda_{92}\xi_2 + \delta_{9}$</td>
<td>$x_{11} = \lambda_{11}\xi_2 + \delta_{11}$</td>
</tr>
<tr>
<td>$x_{10} = \lambda_{10}\xi_2 + \delta_{10}$</td>
<td>$x_{11} = \lambda_{11}\xi_2 + \delta_{11}$</td>
</tr>
<tr>
<td>$x_{11} = \lambda_{11}\xi_2 + \delta_{11}$</td>
<td></td>
</tr>
</tbody>
</table>
Research Design

Within the five school districts that participated in this study there were a total of 17 K-8s and 42 middle schools. The principals and/or secretaries at each school were contacted and voluntarily provided all of the names and email addresses of the middle level teachers at their school site. All of the middle level teachers on the provided list at each respective school site received an informational email via surveymonkey.com. This initial list of teachers resulted in an informational email being sent to a total of 606 K-8 teachers and 1804 middle school teachers about their participation in the survey. This pre-notification email included information of the research, explained why their cooperation was essential to the success of the research, and informed them of an incentive to be given for completed surveys. One to two weeks after the initial contact, an email containing the complete OSTSWE survey via www.surveymonkey.com was sent out to each identified teacher.

Another email reminder was sent out to the teachers that had not filled out the survey two weeks after the original survey was sent. The survey reminders were sent out on two occasions; the first reminder was sent two weeks after the initial email and the second reminder was sent two weeks after the first reminder only for those teachers who had not completed the survey. As indicated in the initial contact email, participants were included in a raffle that was conducted four weeks after the initial survey was sent out in which two Apple iPod Touch prizes were raffled off. After one month the data were
collected and analyzed. The entire data collection process took approximately two months to complete.

School performance for each participating teacher was measured using mean score values on ELA, Algebra 1, Science and History in the 8th grade for the 2008-2009 school year. An arithmetic average value of the reported CST scores was calculated for each school and then each school was ranked from lowest score (1) to highest score (60). 6th grade CST scores for the same schools were also used to compute mean score value using data from the 2006-2007 school year. These data were examined in order to determine if there was a drop in student achievement due to the transition to middle school. All CST information was collected from the California Department of Education (CDE) website. Additionally, school demographic variables were also obtained from the CDE website. These variables included, percentage of non-white students, percentage of students in free and reduced lunch, percentage of students in the English Language Learners (ELL) program, percentage of students with disabilities, and average parent education level.
Chapter 5

Analysis and Results

A total of 59 schools from five different school districts participated in this dissertation study. Out of the 59 schools, 17 were identified as K-8 schools and the remaining 42 were middle schools. The schools contained a range of certificated staff members with the lowest having 16 teachers at a school site to the highest having 66 teachers at a school site. Table 5.1 provides details across the school districts that were contacted to participate in the study. Six-hundred and six K-8 teachers and 1,804 potential middle school teachers that were sent the survey (2,410 teachers total). An overall total sample of 628 teachers completed the survey (26.1% response rate) and are included in the analyses reported in this chapter. A total of 154 K-8 teachers filled out the survey representing a response rate of 25.4%, whereas a total of 474 middle school teachers filled out the survey representing a response rate of 26.3%. Table 5.2 provides the details of the districts and teachers that completed the survey.

Table 5.1: School District Number of Schools and Teachers Information

<table>
<thead>
<tr>
<th>School District</th>
<th># of K-8 Schools</th>
<th># of Middle Schools</th>
<th># of K-8 Teachers</th>
<th># of Middle School Teachers</th>
<th>Total # of Teachers Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colton Unified</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>179</td>
<td>179</td>
</tr>
<tr>
<td>Fontana Unified</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>392</td>
<td>392</td>
</tr>
<tr>
<td>Hacienda La Puente Unified</td>
<td>4</td>
<td>6</td>
<td>146</td>
<td>149</td>
<td>295</td>
</tr>
</tbody>
</table>
It is important to note that two out of the five school districts contained MS teachers only, while the remaining three districts contained both K-8 and MS teachers.

Table 5.2: Teacher Response Rate by School District

<table>
<thead>
<tr>
<th>School District</th>
<th>Teacher Responses</th>
<th># of K-8 Teachers</th>
<th># of MS Teachers</th>
<th>Overall % Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colton Unified</td>
<td>36</td>
<td>0</td>
<td>36</td>
<td>20.1%</td>
</tr>
<tr>
<td>Fontana Unified</td>
<td>159</td>
<td>0</td>
<td>159</td>
<td>40.6%</td>
</tr>
<tr>
<td>Hacienda-La Puente Unified</td>
<td>80</td>
<td>47</td>
<td>41</td>
<td>27.1%</td>
</tr>
<tr>
<td>Paramount Unified</td>
<td>39</td>
<td>17</td>
<td>22</td>
<td>34.8%</td>
</tr>
<tr>
<td>San Diego Unified</td>
<td>308</td>
<td>90</td>
<td>225</td>
<td>21.5%</td>
</tr>
</tbody>
</table>

Performance Comparison

A t-test comparing the combined mean scaled CST scores of ELA and math achievement between K-8 and middle schools at the 6th grade level indicated that the 6th grade students at K-8 schools ($m = 335.58, SD = 27.18$) did not significantly outperform
their middle school 6th grade peer schools \([m = 332.72, SD = 20.36]; t(626)= 1.39, p = .165]\). However, a second independent sample t-test comparing the mean scaled scores between achievement (average of ELA, Algebra 1, Science, and Social Studies CST scores) of K-8 and middle schools at the 8th grade level indicated that 8th grade students at K-8s \((m = 344.24, SD = 33.22)\) significantly outperformed 8th grade students at the middle schools \([m = 338.15, SD = 23.72]; t(626) = 2.49, p = .013\). It is noted that the 6th grade CST scaled scores were taken during the 2006-2007 school year and the 8th grade scores were taken from the 2008-2009 school year in order to theoretically study the same cohort of students.

Model Comparison

The proposed theoretical model was tested using structural equation modeling (SEM) techniques implemented through LISREL 8.80 computer program (Jöreskog & Sörbom, 2006). The empirical validation of a multifactor model of school culture across the K-8 and middle school contexts explained how school culture at the school level affected children’s learning experiences and as a result, school performance. This analysis attempted to determine whether or not the K-8 and middle school data fit the originally proposed Heck and Marcoulides (1996b) model. This assessment was conducted by examining the Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), Chi-Square Test, the Root Mean Square Error of Approximation (RMSEA), and the 90% Confidence Interval of the RMSEA fit criteria.
As indicated in Chapter 4, obtained values of CFI, GFI, and NFI can be thought of loosely as measures of the amount of variance and covariance in the data accounted for by the proposed model. It is commonly accepted that individually examined values approaching or above 0.95 are expected for good model fit. The chi-square ($\chi^2$) test can also be used to determine if the model examined is statistically significantly different from the so-called null model; the model for which no correlations are posited as existing amongst the considered variables. A non-significant value obtained for a chi-square test and evaluated through its corresponding $p$-value is indicative of good model fit. However, because it is quite well-known that the chi-square test is notoriously sensitive to sample size and has a tendency to reject models that are only marginally inconsistent with the data, very little emphasis will be placed on these results (Raykov & Marcoulides, 2006; 2008). In contrast, RMSEA values are said to be much less sensitive to sample size issues. It is commonly accepted that RMSEA values close to 0.05 and with small Confidence Intervals with the left tail end including the value zero are indicative of good model fit (Marcoulides et al., 2005). These fit indices were selected due to their “widespread use and their use-fullness in comparing samples of unequal sizes” (Marcoulides & Heck, 1993b, p. 88).

Since the study utilized an a priori defined model to be tested, a first objective lies in determining the adequacy of model fit to the MS and K-8 data. Once model fit is determined, then the significance of the various parameter estimates can be ascertained for each school structure type. If the model does not show adequate fit to either the
considered MS or K-8 data, then the paths and even the variables included in the model might potentially have to be re-conceptualized.

Upon ascertaining good model fit separately to the MS and K-8 data, a subsequent test of model invariance will be used in order to compare if the parameter estimates are the same for the two school structure types (Jöreskog, 1971). Tests of model invariance allow researchers to study potential group differences and expands the literature as it attempts to add insights into the construct validity of measures (Marcoulides & Heck, 1993b). In particular, these tests will enable a discussion with regards to the potential similarities and differences within the proposed model across the K-8 and middle school data when attempting to explain how culture variables impact school achievement. The value of a proposed theoretical model is said to be greatly enhanced if the same model can be replicated in samples from the same or from different populations (Heck & Marcoulides, 1990). Upon determining overall model invariance, parameter estimates can then also be compared in order to examine the contribution of each observed and latent variable to the overall model across the K-8 and middle school types. Assessing the magnitudes of the parameter estimates can provide information with regards to the strongest and weakest path estimate of culture variables (direct and indirect) on school achievement in the proposed model (Koufteros & Marcoulides, 2006; Marcoulides & Heck, 1993b). Additionally, assessing the magnitude of the parameter estimates of the paths in the model provides insight concerning the predictive power of any one variable on another. The higher the value of the parameter estimate the more important it is in contributing to the prediction of the particular outcome variable. The path coefficients
can be interpreted in a regression-like manner where a one unit increase in a variable is associated with a specific corresponding increase in another variable.

In order to compare the achievement differences between MS and K-8 schools included in this study, tests of group difference using a t-test will also be conducted. These t-tests compare the mean scaled CST scores of the K-8 schools against those of the middle schools at both the 6th (mean CST scores on Math and ELA) and the 8th grade level (mean CST scores on Algebra 1, ELA, Science, and Social Studies). Examining the results of these t-tests provide insight into determining which middle-level structure is significantly outperforming the other by comparing the averages on mean CST scores at the 6th grade level and then at the 8th grade level.

Table 5.3 provides descriptive information about the observed variables considered in the a priori proposed model. Each observed variable was constructed by parceling particular questions included in the survey (for further details on parceling of the items included in the model, see Heck & Marcoulides, 1996b). The observed variable means, standard deviations, and ranges, are presented for each parceled variable included in the model. The observed variables are listed according to which particular latent variable (bolded and italicized) they measure.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (N = 628)</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Structure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of Bureaucracy (x5)</td>
<td>14.06</td>
<td>3.32</td>
<td>5-25</td>
</tr>
</tbody>
</table>
Table 5.4 provides descriptive information about the observed variable means and standard deviations across both teacher groups. The observed variable means, standard deviations, and mean comparison t-statistic with corresponding p-value are presented for each parceled variable included in the model. The observed variables are listed according to which particular latent variable (bolded and italicized) they measure. Teacher perceptions of: (1) their schools level of bureaucracy, (2) how much innovation is encouraged by the administration, (3) the principal’s responsiveness to teacher issues, (4) their social relationships with their peers, and (5) their collegiality with their peers were similar across both school groups. MS teachers, more than K-8 teachers, believe they are provided or participate in more: (1) time for collaboration, (2) situations to participate in educational decision making, (3) availability to resources, (4) effective principal leadership practices, and (5) open communication with their peers. K-8 teachers tended to have higher perceptions of parental support than teachers in the MS group.
Table 5.4: Descriptive Statistics of Variables in Both Groups

<table>
<thead>
<tr>
<th>Variables</th>
<th>K-8 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K-8 SD</td>
</tr>
<tr>
<td></td>
<td>MS Mean</td>
</tr>
<tr>
<td></td>
<td>MS SD</td>
</tr>
<tr>
<td></td>
<td>t value;</td>
</tr>
<tr>
<td></td>
<td>p value</td>
</tr>
<tr>
<td><strong>Organizational Structure</strong></td>
<td></td>
</tr>
<tr>
<td>Degree of Bureaucracy (x₅)</td>
<td>13.93</td>
</tr>
<tr>
<td></td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>14.10</td>
</tr>
<tr>
<td></td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>-0.54; 0.59</td>
</tr>
<tr>
<td><strong>Organizational Values</strong></td>
<td></td>
</tr>
<tr>
<td>Time for Collaboration (x₁₁)</td>
<td>9.62</td>
</tr>
<tr>
<td></td>
<td>2.97</td>
</tr>
<tr>
<td></td>
<td>10.60</td>
</tr>
<tr>
<td></td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>-3.70; 0.00</td>
</tr>
<tr>
<td>Encourage Innovation (x₁₂)</td>
<td>11.00</td>
</tr>
<tr>
<td></td>
<td>2.31</td>
</tr>
<tr>
<td></td>
<td>11.40</td>
</tr>
<tr>
<td></td>
<td>2.28</td>
</tr>
<tr>
<td></td>
<td>-1.82; 0.70</td>
</tr>
<tr>
<td>Participate in Decisions (x₁₃)</td>
<td>10.12</td>
</tr>
<tr>
<td></td>
<td>3.10</td>
</tr>
<tr>
<td></td>
<td>10.99</td>
</tr>
<tr>
<td></td>
<td>2.97</td>
</tr>
<tr>
<td></td>
<td>-3.11; 0.00</td>
</tr>
<tr>
<td><strong>Managerial Processes</strong></td>
<td></td>
</tr>
<tr>
<td>Availability of Resources (x₈)</td>
<td>8.86</td>
</tr>
<tr>
<td></td>
<td>3.01</td>
</tr>
<tr>
<td></td>
<td>9.89</td>
</tr>
<tr>
<td></td>
<td>2.87</td>
</tr>
<tr>
<td></td>
<td>-3.79; 0.00</td>
</tr>
<tr>
<td>Principal Responsiveness (x₉)</td>
<td>13.18</td>
</tr>
<tr>
<td></td>
<td>3.01</td>
</tr>
<tr>
<td></td>
<td>13.63</td>
</tr>
<tr>
<td></td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>-1.70; 0.90</td>
</tr>
<tr>
<td>Principal Leadership (x₁₀)</td>
<td>21.74</td>
</tr>
<tr>
<td></td>
<td>6.54</td>
</tr>
<tr>
<td></td>
<td>23.11</td>
</tr>
<tr>
<td></td>
<td>5.45</td>
</tr>
<tr>
<td></td>
<td>-2.57; 0.01</td>
</tr>
<tr>
<td><strong>Organizational Climate</strong></td>
<td></td>
</tr>
<tr>
<td>Social Relationships (x₂)</td>
<td>23.42</td>
</tr>
<tr>
<td></td>
<td>4.06</td>
</tr>
<tr>
<td></td>
<td>24.10</td>
</tr>
<tr>
<td></td>
<td>4.04</td>
</tr>
<tr>
<td></td>
<td>-1.80; 0.72</td>
</tr>
<tr>
<td>Open Communication (x₃)</td>
<td>10.01</td>
</tr>
<tr>
<td></td>
<td>3.57</td>
</tr>
<tr>
<td></td>
<td>10.81</td>
</tr>
<tr>
<td></td>
<td>3.14</td>
</tr>
<tr>
<td></td>
<td>-2.63; 0.01</td>
</tr>
<tr>
<td>Collegiality of Teachers (x₄)</td>
<td>13.99</td>
</tr>
<tr>
<td></td>
<td>2.16</td>
</tr>
<tr>
<td></td>
<td>14.20</td>
</tr>
<tr>
<td></td>
<td>2.09</td>
</tr>
<tr>
<td></td>
<td>-1.03; 0.30</td>
</tr>
<tr>
<td><strong>Teacher Attitudes</strong></td>
<td></td>
</tr>
<tr>
<td>Perceptions of Parents (x₇)</td>
<td>10.43</td>
</tr>
<tr>
<td></td>
<td>3.21</td>
</tr>
<tr>
<td></td>
<td>9.19</td>
</tr>
<tr>
<td></td>
<td>3.02</td>
</tr>
<tr>
<td></td>
<td>4.32; 0.00</td>
</tr>
</tbody>
</table>

Table 5.5 presents the obtained criteria fit for the proposed model examined across three separate snapshots of the collected data: (i) the entire sample of teachers regardless of school structure, (ii) teachers from the K-8 schools alone, and (iii) teachers from the MS structure alone. As can be seen by examining the fit indexes on Table 5.5, with the expected exception of the significant chi-square value, all the measures of model fit indicated good fit of the model to each of the three snapshots of the collected data. Thus, it is clear that the a priori proposed model fits the obtained data at the total sample level, the K-8 level, and the MS level.
Table 5.5: Measures of Model Fit

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (N = 628)</th>
<th>K-8 (N = 154)</th>
<th>MS (N = 474)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square ($\chi^2$) and P-value</td>
<td>332.17; $p = 0.00$</td>
<td>141.09; $P = 0.00$</td>
<td>267.67; $p = 0.00$</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.97</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.10</td>
<td>0.12</td>
<td>0.10</td>
</tr>
<tr>
<td>90 Percent Confidence Interval for RMSEA</td>
<td>(0.09; 0.11)</td>
<td>(0.09; 0.14)</td>
<td>(0.08; 0.11)</td>
</tr>
</tbody>
</table>

The parameter estimates, standard errors, and t-values for the endogenous and exogenous latent variables obtained for the total sample and the separate K-8 and MS data sets are presented respectively in Tables 5.6 and 5.7. All factor loadings for the latent variables included in the model were found to be statistically significant as determined by examining their t-statistic values and ensuring that the t value was greater than 1.96 (the critical value at $\alpha = .05$ ; Diamantopoulos & Siguaw, 2007).

Table 5.6: Factor Loading Matrix (Variables Reflecting Endogenous Latent Variables)

<table>
<thead>
<tr>
<th>Observed Variable</th>
<th>Total Sample (N = 628)</th>
<th>K-8 (N = 154)</th>
<th>M.S. (N = 474)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Resources ($x_8$)</td>
<td>0.81</td>
<td>0.87</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.07)</td>
<td>(0.04)</td>
</tr>
<tr>
<td></td>
<td>23.88</td>
<td>13.26</td>
<td>19.53</td>
</tr>
<tr>
<td>Principal Responsiveness (x₉)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Principal Leadership (x₁₀)</td>
<td>0.90</td>
<td>0.90</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.04)</td>
<td>(0.04)</td>
</tr>
<tr>
<td></td>
<td>22.50</td>
<td>22.50</td>
<td>22.51</td>
</tr>
<tr>
<td>Perceptions of Students (x₇)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Teachers Attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Relationships (x₂)</td>
<td>0.71</td>
<td>0.75</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.06)</td>
<td>(0.04)</td>
</tr>
<tr>
<td></td>
<td>20.86</td>
<td>12.39</td>
<td>17.01</td>
</tr>
<tr>
<td>Open Communication (x₃)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Collegiality of Teachers (x₄)</td>
<td>0.42</td>
<td>0.31</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.08)</td>
<td>(0.04)</td>
</tr>
<tr>
<td></td>
<td>14.39</td>
<td>4.09</td>
<td>12.97</td>
</tr>
<tr>
<td>School Performance (x₁)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Organizational Climate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Performance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The obtained factor loadings presented in both Table 5.6 and 5.7 provide evidence that the variables included in the proposed model are important measures of the considered latent variables. All parameter estimates exhibited small standard errors confirming that the observed variables are stable estimates of the latent variables. Appendix A provides detailed information concerning the parceled variables and survey questions that were used to measure each latent variable.
Table 5.7: Factor Loadings (Variables Reflecting Exogenous Latent Variables)

<table>
<thead>
<tr>
<th>Observed Variable</th>
<th>Total Sample (N = 628)</th>
<th>K-8 (N = 154)</th>
<th>M.S. (N = 474)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of Bureaucracy (x_5)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Time for Collaboration (x_{11})</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Encourage Innovation (x_{12})</td>
<td>0.63 (0.02)</td>
<td>0.62 (0.04)</td>
<td>0.62 (0.02)</td>
</tr>
<tr>
<td></td>
<td>30.88</td>
<td>15.78</td>
<td>27.72</td>
</tr>
<tr>
<td>Participate in Decisions (x_{13})</td>
<td>0.74 (0.02)</td>
<td>0.71 (0.04)</td>
<td>0.75 (0.02)</td>
</tr>
<tr>
<td></td>
<td>37.52</td>
<td>17.78</td>
<td>30.29</td>
</tr>
</tbody>
</table>

For completeness and ease of presentation, Figure 2.1 is presented once again (labeled Figure 5.1) as the next several tables and corresponding discussions refer to specific aspects of the a priori proposed model.

Figure 5.1: Proposed Model of Organizational Culture and School Performance
The obtained parameters estimates for the path coefficients examining the impact of the exogenous latent variables (e.g., Organizational Values) on the endogenous latent variables (e.g., Teacher Attitudes) are presented in Table 5.8. The first provided value corresponds to the parameter estimate, the value below in parenthesis to the corresponding standard error, and the third the corresponding t-test value. Generally speaking, an effect size of 0.2 to 0.3 is considered to be a "small" or "weak" effect, around 0.5 a "medium" effect and 0.8 to one, a "large" or "strong" effect.

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>K-8</th>
<th>M.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Values → Managerial Processes</td>
<td>0.65 (0.02)</td>
<td>0.65 (0.04)</td>
<td>0.64 (0.02)</td>
</tr>
<tr>
<td></td>
<td>31.12</td>
<td>17.71</td>
<td>26.62</td>
</tr>
<tr>
<td>Organizational Structure → Managerial Processes</td>
<td>-0.40 (0.04)</td>
<td>-0.01 (0.06)</td>
<td>-0.09 (0.05)</td>
</tr>
<tr>
<td></td>
<td>-10.09</td>
<td>-0.22</td>
<td>-1.65</td>
</tr>
<tr>
<td>Organizational Values → Teacher Attitudes</td>
<td>0.80 (0.17)</td>
<td>0.83 (0.09)</td>
<td>0.30 (0.04)</td>
</tr>
<tr>
<td></td>
<td>4.73</td>
<td>9.22</td>
<td>7.51</td>
</tr>
<tr>
<td>Organizational Values → Organizational Climate</td>
<td>0.74 (0.02)</td>
<td>0.76 (0.02)</td>
<td>0.72 (0.03)</td>
</tr>
<tr>
<td></td>
<td>32.33</td>
<td>31.01</td>
<td>24.46</td>
</tr>
<tr>
<td>Organizational Structure → Organizational Climate</td>
<td>-0.03 (0.03)</td>
<td>-0.03 (0.02)</td>
<td>-0.06 (0.07)</td>
</tr>
<tr>
<td></td>
<td>-1.02</td>
<td>-1.50</td>
<td>-0.95</td>
</tr>
</tbody>
</table>
As can be seen by examining Table 5.8, the direct effect of organizational values on managerial processes was found to be statistically significant across the total sample and the K-8 and MS groups. The obtained values for K-8 ((0.65); \( t(628) = 17.71, p < 0.01 \)) and MS ((0.64); \( t(628) = 26.62, p < 0.01 \), respectively) indicate that teachers in both school structures reported that the latent variable, organizational values, had similar direct effects and is considered to be a strong predictor of managerial processes. As specified previously, this parameter estimate can be interpreted just like a regression coefficient and indicates that for every one unit change in the measure of organization values there is respectively in each school structure type a corresponding 0.64 or 0.65 increase in the value of the measure of managerial processes. This finding essentially implies that teachers that are given time for collaboration, are encouraged to be innovative, and participate in school wide decisions also had similar access to the resources they needed and a principal that was responsive with effective leadership practices.

The direct effect of organizational values on teacher attitudes was also found to be statistically significant across the K-8 and MS considered groups. Nevertheless, for K-8 teachers, the latent variable organizational value (0.83) was more important in predicting teacher attitudes (0.83) than for the MS teachers (0.30). K-8 schools with more innovation, and more teachers participating in decision making were much more likely to be associated with higher teacher perceptions of the parental support that their students have.
The direct effect of organizational values on organizational climate was also found to be significant across the K-8 and MS teacher groups. For both groups the latent variable organizational values appeared to be equally important in predicting organizational climate (0.76 and 0.72). Thus, K-8 and MS teachers from schools with high organizational values were similarly associated with schools that exhibited high teacher relationships, communication, and collegiality.

All other paths considered in the model were found to be non-significant. For example, the magnitude of the path between organizational structure and managerial processes was found to be -0.01 for the K-8 teachers and -0.09 for the MS teachers. Similarly, results were exhibited by the paths between organizational structure and organizational climate.

The parameter estimates for the K-8, and MS groups between the endogenous variable paths are presented in Table 5.9.

| Table 5.9: Structural Components of the Model (Endogenous Latent Variables to Endogenous Latent Variables) |
|-------------------------------------------------|-----------------|-----------------|-----------------|
| | Total Sample (N = 628) | K-8 (N = 154) | M.S. (N = 474) |
| Organizational Climate → Teacher Attitudes | 0.81 (0.20) 4.04 | 0.37 (0.08) 4.62 | 0.60 (0.08) 7.50 |
| Managerial Processes → Teacher Attitudes | 0.19 (0.22) 0.87 | 0.26 (0.11) 2.31 | 0.64 (0.24) 2.67 |
| Managerial Processes → Organizational Climate | 0.36 (0.06) 6.01 | 0.42 (0.07) 6.01 | 0.45 (0.09) 5.00 |
As can be seen by examining the results displayed in Table 5.9 the magnitude of the path between organizational climate and teacher attitudes was similar for MS teachers (0.60; \( t(628) = 7.50, p < 0.01 \)) and K-8 teachers (0.37; \( t(628) = 4.62, p < 0.01 \)). This suggests that the impact of organizational climate on teacher attitudes is perceived as being similar by MS and K-8 teachers. Thus in both groups, teacher perceptions of their relationships, communication, and collegiality with their staff was associated with positive perceptions of parental support that their students have.

The parameter estimate between managerial processes and teacher attitudes was found to be significant for teachers from both types of school structures. Nevertheless, for teachers from K-8 schools (0.26; \( t(154) = 2.31; p < .01 \)) it appears to be somewhat less important than for teachers in the MS configuration (0.64; \( t(474) = 2.67; p < .01 \)). MS teachers and K-8 teachers associate higher levels of principal leadership methods to higher levels of teacher perceptions of their student’s parental support.

The magnitude of the path between managerial processes and organizational climate was also found to be significant in both the K-8 and MS teacher groups (K-8 =
0.42, MS = 0.46). Thus both teachers from both K-8 and MS configurations perceive principal actions to be similarly important in explaining the school’s collegiality and communication.

The direct path between organizational climate and school performance was determined to be significant only in the K-8 teacher group (0.33; t (154) = 2.40; p < .01). It appears that organizational climate is not perceived by MS teachers as impacting school performance. Similar differences between the perceptions of teachers from K-8 and MS school configurations were also determined for the path between teacher attitudes and school performance (0.17; t (154) = 3.93; p < .01). This result indicates that K-8 teachers were more likely to feel that higher teacher perceptions of their student’s parental support were predictive of school performance. Thus, teacher attitudes of teachers from K-8 school configurations were determined to be a better predictor of school performance than from teachers from MS schools. All other paths considered in the model were found to be non-significant.

In addition to examining direct effects, the magnitude of indirect effects in the model can also be investigated. Based upon a review of the literature, a number of indirect effects on school performance were examined in this study (see Table 5.10 for a complete list of the indirect effects examined in this study). It is noted that the magnitude of the indirect effect can be readily computed using the so-called tracing rule (which in most cases is essentially the product of the corresponding path coefficients between various direct effects). For example, to determine the indirect effect of organizational values on school performance (0.25) for K-8 teachers, the product of the direct effects
between organizational values on organizational climate (0.76) and between organizational climate and school performance (0.33) is taken.

Table 5.10: Indirect Effects to School Performance

<table>
<thead>
<tr>
<th>Path</th>
<th>Total Sample (N = 628)</th>
<th>K-8 (N = 154)</th>
<th>MS (N = 474)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Values → Organizational Climate → School Performance</td>
<td>(0.74) x (0.42) = 0.31</td>
<td>(0.76) x (0.33) = 0.25</td>
<td>(0.72) x 0.04</td>
</tr>
<tr>
<td>Organization Values → Teacher Attitudes → School Performance</td>
<td>(0.80) x (0.62) = 0.50</td>
<td>(0.83) x (0.17) = 0.14</td>
<td>(0.30) x 0.07</td>
</tr>
<tr>
<td>Organization Values → Managerial Processes → School Performance</td>
<td>(0.65) x (0.19) = 0.12</td>
<td>(0.65) x (0.24) = 0.16</td>
<td>(0.64) x 0.35</td>
</tr>
<tr>
<td>Organizational Structure → Organizational Climate → School Performance</td>
<td>(-0.03) x (0.42) = -0.01</td>
<td>(-0.03) x (0.33) = -0.01</td>
<td>(-0.06) x -0.003</td>
</tr>
<tr>
<td>Organizational Climate → Teacher Attitudes → School Performance</td>
<td>(0.81) x (0.62) = 0.50</td>
<td>(0.37) x (0.17) = 0.06</td>
<td>(0.60) x 0.14</td>
</tr>
</tbody>
</table>

As can be seen by examining the indirect values displayed in Table 5.10, the magnitude of the indirect effects of organizational values on school performance via organizational climate and on school performance via managerial processes were sizeable for the K-8 teachers. In the MS teacher sample the indirect effect for organizational values on school performance via managerial process was found to be sizeable. For the total sample the magnitude of indirect effects of organizational values on school performance via organizational climate and on school performance via teacher attitudes
and the indirect effect of organizational climate to school performance via teacher attitudes were sizeable. All remaining indirect effects were deemed to be of little importance in predicting the various outcome variables considered.
Chapter 6
Discussion

This chapter provides an overview and discussion of the most important variables that were determined to explain school performance, draws corresponding and relevant conclusions based on the examined Heck and Marcoulides (1996b) model, provides suggestions for administrative leadership practices, and finally considers the limitations of the study with suggestions for further research.

In summary, the results of this dissertation study make a significant contribution to the extant literature on middle school culture and its impact on school outcomes in two important ways: (i) the study provides support concerning the construct validity of the originally-proposed Heck and Marcoulides model (1996b) across teachers from both K-8 and MS school structures, and (ii) given the evidence that K-8 schools outperform MS at the 8th grade level, it ascertains the specific aspects of teacher-perceived cultural variables at the K-8 and MS structures that are important and how these perceptions specifically and collectively impact school performance. Because the examined model was found to fit the teacher data from both types of school structures and because a statistically significant difference was determined in the 8th grade performance, one can compare the specific aspects of the model across the two teacher groups and confirm which paths differ and infer that the higher performance may indeed be explained by the higher teacher perception on that particular path. Given the fact that some variables emerged as better predictors of performance according to teachers from each school type suggests that school leaders should become more aware of their teachers’ perceptions on these
variables and also consider ways to change those aspects that appear to influence school performance. While simply changing leadership practices to mirror successful schools may not necessarily result in direct specific changes in outcomes, any discussions of teacher-perceived best practices by leaders and staff must at least begin with an understanding of the important variables influencing schools.

The Examined Model

The proposed model examined and tested in this dissertation study across teachers from two different types of middle level school structures compared quite favorably with previous studies of organizational culture and performance in for-profit organizations (Marcoulides & Heck, 1993a), at the high school level in Singapore (Heck & Marcoulides, 1996b), and across elementary and high school level data obtained from the Trends in International Mathematics and Science Study (TIMSS) data (Marcoulides, Heck, & Papanastasiou, 2005). Although the overall model tested in this dissertation study was determined to fit equally well with both types of middle school structures considered, the actual magnitude of the parameter estimates within the model reflecting the effects across specific latent variables and on the outcome variable differed somewhat across the two school types. Based upon results obtained in past research studies, it appears that the observed variation of the parameter estimates across the two school types found in this dissertation can most likely be attributed to one main reason, namely the different school contexts considered.
This inferred difference as a function of the school context is further supported by the fact that the model fit and parameter estimates obtained on the total teacher sample (i.e., when ignoring the two considered school structures) were quite similar to those obtained for the originally proposed Heck and Marcoulides (1996b) model. Nevertheless, once the separate teacher groups (school configuration) were introduced into the analysis, the model did not fit the data from the two school structures in the same manner. Indeed, since the actual magnitude of effects within the model also changed once school configuration was taken into account, it is clear that the school configuration is the key factor bringing about these changes. For example, similar to the originally proposed model, in the total teacher sample the sole important direct factor in explaining school performance was teacher attitudes. In contrast for the K-8 group, the most important variables explaining school performance were organizational climate and teacher attitudes. In the MS group no significant direct effects to school performance were determined.

It should be emphasized that a number of the observed variations between the MS and K-8 schools in the examined model did not follow some of the current middle level literature (this issue will be revisited in detail in the next section). Although it is possible that the current pressures for school accountability might also be somewhat responsible for the observed differences, whereas previous middle level research was mostly conducted at a time when accountability pressures were not as dominant, the fact that similar results were obtained within each school type negates this assertion.
The examined model specified three interrelated dimensions of organizational culture each having their own direct and indirect impact on the outcome variable of school performance. These dimensions included a sociocultural subsystem (comprised of organizational structure and managerial processes), an organizational belief system (comprised of organizational values and climate), and an individual belief subsystem (comprised of teacher attitudes). Given that specific differences in the achievement scores at the 8th grade level between the two types of schools considered in this dissertation study were observed, the three interrelated dimensions of organizational culture are considered separately and discussed in more detail next. It should be emphasized that only those direct and indirect effects that demonstrated significant effects on achievement and in accordance with the literature are considered in this discussion.

Sociocultural Subsystem

The magnitude of the effect of managerial processes on teacher attitudes was determined to be similar in both school structures investigated. This was considered a rather surprising and unexpected result as one of the major tenets of the K-8 school, and one that is repeatedly emphasized in the literature, is the apparent community-like relationships fostered between the teachers and their principal and between the teachers and parents. K-8 teachers were found to have higher perceptions of parental support (see details provided in Table 5.4) due to the longer period of time that they work with the same parents and thus have more chances to connect with them compared to the MS
teachers (Look, 2002; Lee & Smith, 1993). However, because K-8 teachers worked with the same parents for a longer period of time (9 years at the K-8 versus 3 years at the MS) the data suggest that the teachers may become more frustrated with the lack of support by the principal to connect the parents with the school. In other words, although there are more parental contacts within the K-8 school structure, the magnitude of this path may suggest that the K-8 teachers believe that more should be done by the school’s leadership to actually connect the community to the schools in order to follow what was found in the literature review. Thus, it is suggested that K-8 administrators be encouraged to use their leadership skills and perhaps develop workshops that will build relationships and raise parental support as this school structure was originally intended to do.

The magnitude of the direct effect of managerial processes on organizational climate within both teacher groups associated high levels of principal leadership with high levels of teacher’s relationships, communication, and collegiality at the school site. Teachers at both the MS and K-8 levels that indicate high levels of collegiality and enjoy working with one another report higher levels of principal leadership practices. This finding contradicts results from previous studies that found lower collegiality amongst the MS teachers as compared to the K-8 teachers (Hough, 2005; Look, 2002). The magnitude of this effect is particularly critical because it contradicts previous qualitative research which asserts that K-8 teachers believe greater social relationships, communication, and collaboration are developed among the K-8 staff members due to the presence of more elementary teachers who are more inclined to collaborate than their single- subject middle school peers (Schaarsmith, 2005). The results examined in Table...
5.4 do not support the previous literature because the MS staff believes that they are as collegial and social as the K-8 teachers.

The annual state school performance results based on the California State Exams continually reinforce the fact that administrators in low performing schools must alter their management styles. Such changes are apparently necessary so that principals can not only identify the strengths and weaknesses of their teachers, but can develop strategies to motivate and challenge their staff to become more collegial and communicative in order to raise levels of school performance. For example, administrators are encouraged to become more transformational leaders because transformational practices (intellectual stimulation, inspirational motivation, individualized consideration, and idealized influence) have been found to be positively correlated to outcomes such as job satisfaction, subordinate morale, organization climate, and higher test scores (Avolio et al, 1999; Avolio & Bass, 2004; Judge & Bono, 2000; Leithwood & Jantzi, 1997). As Marcoulides et al. (2005) have suggested, and various results in this dissertation study clearly support, a leader that “seeks to build commitment to vision and purpose through building collegial relations” (p. 150) is needed. In this case, principals can strategically focus on specific instructional leadership actions in order to create a climate of trust and collegiality amongst the staff.

Finally, the indirect impact of organizational structure on school performance via organizational climate (Hypothesis 4E) was not supported in this study and was determined to not be significant in explaining school performance for the K-8 and MS teacher groups. Hypothesis #4E stated that, “At middle schools, higher levels of
perceived bureaucracy and more directives from administration will be associated with lower organizational climate as teachers will not socialize or communicate positively nor collaborate amongst each other, which will result in lower school performance.”

Although Becker et al. (2009) found that efficacious adult-student relationships are easier to foster within the K-8 structure, this study determined that organizational structure did not have an indirect effect on school performance for either school structure type. In fact, non-significant parameter estimates were observed for both K-8 and MS schools. However, the lack of influence of grade configuration on school performance found in this study is quite consistent with recent results reported by William et al. (2010).

Accordingly, the middle level school structure, whether K-8 or MS, had no discernable effect on teacher’s perceptions of the climate, likely because the teachers cared more about the principal’s leadership style and the educational values of the school when attempting to explain school performance. As Heck and Marcoulides (1993) have suggested, instead of comparing the pros and cons of different middle level structures, especially since organizational structure has been found not to affect school performance, school leaders are encouraged to focus on school climate and on school-wide student improvement goals in order to raise teacher attitudes and collegiality. Improving teacher attitudes and collegiality is important as it is those variables that have been found to impact school performance in both school structures. “Because time in the school day is limited, there are trade-offs associated with school management” (Heck & Marcoulides, 1993, p. 26) and deciding on which variables are important in facilitating strong educational outcomes becomes a crucial aspect of the principal’s unwritten duties.
Teacher responses to variables included in the proposed model can be used to distinguish between effective and ineffective principals according to what culture sub-system they believe is the most important (Heck & Marcoulides, 1993). This is because school climate, teacher attitudes, and organizational values appear to explain school performance more than the other latent variables in the considered model.

Organizational Belief Subsystem

The magnitudes of the effects of organizational values on managerial processes and organizational values on organizational climate were determined to be quite similar across the two school types. This unexpected result clearly comes as a positive outcome for middle level schools in California, as both types of schools report that their staff members are reportedly doing some of the same important practices which have been found to impact school performance previously emphasized in the K-8 literature. According that the literature, K-8 teachers were expected to have greater perceptions of organizational values as previous research has suggested that variables associated with organizational values are higher within the K-8 staff. K-8 teachers were expected to have higher levels of collaboration, more encouragement for innovation, and higher participation in decision making than the MS teachers (Look, 2002; Schaarsmith, 2005). The results of this study indicate that teachers at both school types appreciate when they are given time to collaborate and when their feedback is welcomed by the school’s administration, which is related to higher perceptions of the principal’s leadership practices and a more positive school climate. Thus, the findings of this study suggest that
principals should consider paying attention to the organizational values that they support as these values are a reflection of the leader’s vision and purpose. Additionally, based upon the results of this study it is recommended that principals consider involving teachers in Professional Learning Communities (PLCs) to discuss best teaching practices that develop teacher collegiality and that principals involve teachers in the school’s educational decision-making in order to foster a more positive school climate.

The impact of organizational climate on school performance confirms what some previous studies have indicated as a positive effect of a community atmosphere and a “family-feel” that is created between teachers, students, parents, and administrators in K-8 schools. In this study, K-8 teachers have open communication and are more content with their colleagues which creates a more professional workplace with higher staff morale allowing collegiality to take place (Bass, 1995) and a more positive student body (Mendel et al., 2002) resulting in higher achievement at the 8th grade level. Further, higher student achievement in the 8th grade may be explained by previous research as students spend more time in the classroom in the K-8 schools because positive school climates have been associated with fewer disruptive referrals and lower antisocial behavior from students when compared to the MS (Kuperminc et al., 1997). Comparing the model across the two groups and examining the direct path between climate and performance, one can infer that the higher performance in the K-8 schools may be explained by the higher teacher perceptions of organizational climate. Thus, this path supports the premise that schools where positive social and professional relations are developed foster environments where more learning takes place (Heck & Marcoulides,
It would appear that MS leaders should ensure that both the resources (time available and student data) and the capacity (collegiality and open relationships) for effective collaboration are in place at their school in order to possibly improve school performance.

One possible solution may be that middle level leaders should consider directing their efforts towards having MS and elementary teachers meet so that MS teachers better understand their incoming students’ educational and behavioral strengths and weaknesses. Discussion between elementary and middle level teachers about how to better support their students are supposedly already occurring in K-8 schools due to the structure of the schools where both levels are closely located at the same site (Look, 2002). MS leaders should support this collaboration perhaps by setting up the meetings between elementary and MS teachers to discuss concerns and interventions of their common students.

The magnitude of the indirect effect of organizational values on school performance via organizational climate (Hypothesis 4A) obtained in this dissertation study are consistent with previous research findings. Prior research has suggested that the magnitude of the indirect effect will be significantly higher in K-8s than the middle schools. Such a result is also in accordance with Hypothesis 4A, which stated that at K-8 schools, increased levels of collaboration, innovation and participation in decision making will lead to increased levels of teacher socialization and collegiality and result in higher school performance. As Heck et al. (1991) and Chapman (1998) found, and the findings in this study support, student achievement is higher in schools where teachers
reported that their principals created an environment with a positive climate in which the teachers were treated as professionals and involved in the instructional decision making process. MS administrators should think about how to continue involving teachers and supporting the school’s organizational values (time for collaboration, encourage teacher innovation, involve teachers in decisions); however, school leaders should also consider spending some time during staff collaboration or whenever possible to implement team building strategies to create an environment where the staff is empowered with various resources and enjoys working with each other in a collegial manner allowing the principal to focus on more important factors directly related to school performance. It is important to note that the magnitude of the indirect effects of organizational values on school performance via organizational climate were larger than all other indirect effects across the two school types considered. Thus, as indicated previously, one solution for principals to consider in order to impact school performance might be the development of PLCs.

The magnitudes of the indirect effects of organizational values on school performance via teacher attitudes (Hypothesis 4B) and of organizational climate on school performance via teacher attitudes (Hypothesis 4C) were not supported. These indirect effects were determined across both school structure types to be small and statistically not significant in explaining school performance. Thus, the results of this analysis did not provide support for Hypothesis 4B which specifically stated that at K-8 schools, increased levels of collaboration, innovation and participation in decision making would lead to higher levels of teacher attitudes and result in higher school
performance. Similarly, the results did not provide support for Hypothesis 4C which stated that at K-8 schools, increased levels of social relationships, communication, and collegiality will lead to higher levels of teacher positive attitudes about their students and parents which will result in higher school performance. The results of this study indicated that teachers at both school types view the connection between teacher attitudes of parental support on school performance as not important. This was considered a rather surprising and unexpected result especially given that Heck and Marcoulides (1996b), Marcoulides and Heck (1993a), and Marcoulides et al. (2005) previously reported attitudes to have the highest direct effect of school performance. It is important to note that when the proposed model was fit to the entire sample (i.e., without taking into account school structure) attitudes was determined to have the largest direct effect on school performance. However once school structures was taken into account (i.e., the model was fit to the two school structures separately), the effect of teacher attitudes towards school performance decreased considerably. It would appear that school administrators need to consider working on methods to increase parent participation via workshops that educate parents on how to better support their children at home.

The indirect effect of organizational values on school performance via managerial processes investigated (Hypothesis 4D) was supported at both the K-8 and MS structures. However, rather unexpectedly, the actual magnitude of the effect was determined to be greater at the MS level. In accordance with Hypothesis 4D, increased levels of collaboration, encouragement for innovation, and participation in decision making was associated with more available resources and higher responsive principal actions which
will result in higher school performance because the teachers will have the available resources and collaboration time to better help their students. It was expected that the organization’s emphasis on certain values would impact the principal’s actions towards how they respond to teachers and how they distribute resources which would affect performance. In order to improve teacher perceptions of managerial processes school administrators should consider empowering teachers with necessary resources (e.g. fiscal, time, technology, etc.) and the ability to respond to issues without administrator interference. Thus, instead of micro-managing the resources that belong in the classroom with teachers, administrators should consider distributing some of their leadership responsibilities and focus more of their time indirectly influencing school outcomes by creating a more positive school culture and promoting teacher relationships with parents (Heck et al., 1991; Ogawa & Bossert, 1995). As a possible solution, school leaders can improve the teacher perceptions of managerial processes at both school structures by presenting and supporting their vision, provide training on how to accomplish the organization’s values that are tied in to the vision, and entrust teacher-leaders to move the school forward with certain responsibilities and resources allocated to them.

Individual Belief Subsystem

The direct effect of teacher attitudes of parental support on school performance was found to be important in both K-8 and MS schools. However, the magnitude of the direct effect was determined to be significantly higher in the K-8 schools. This result is most likely due to the fact that K-8 parents tend to maintain for a longer time
relationships at the school (Connolly et al., 2002; Juvonen et al. 2004; Offenberg 2001) and during this time the parents are more likely to visit or call their child’s teacher if there are any issues (Weiss & Kipnes, 2006). These results are quite consistent with previous research that has suggested that variables associated with teacher attitudes of parental support are predictive of school performance. For teachers in K-8 schools teacher attitudes of parental support are perceived as somewhat more important influences of school performance than for teachers from MS structures. Thus, it would appear that in order to influence this perception at the MS, a principal may attempt to increase parent-teacher communication and to implement workshops to better educate their parents on how they can support their children to study and complete their work while at home. These workshops at the MS need to be done in a much more efficient and effective manner than in the K-8s, as MS structures simply do not have as much time as the K-8s to build relationships and community trust.

**Direct Effects on School Performance**

The magnitude of the direct effects of variables on school performance examined in the model considered in this study did not fully support what previous researchers have reported in the literature (e.g., Heck & Marcoulides, 1996b; Marcoulides & Heck, 1993a; Marcoulides et al., 2005). Previous research indicated that teacher attitudes have the greatest impact on school performance. In contrast in this dissertation study, teacher attitudes were not found to have the greatest impact on performance. Although the importance of teacher attitudes relative to previous research was corroborated when the
model was examined across the entire sample, once school configurations were taken into account this impact diminished.

Contrary to past research, this dissertation study found that only for the K-8 teacher group did a number of specific variables have significant direct effects on the outcome variable of school performance. These variables included: organizational climate, teacher attitudes, and managerial processes. All these variables were found to explain school performance in K-8 schools. In addition, the magnitudes of these effects were determined to be much stronger in K-8 schools than those determined for teachers within the middle school structure. A couple of interpretations of this finding seem plausible, especially given the nature of the data utilized in this study:

1. The assumption that there has been a change in the school’s values as the accountability pressures to increase test scores over the last five years are now felt by all staff members, and
2. The fact that the measurement of teacher attitudes of parental support was obtained using newly worded questions not used in previous studies.

The first point above is particularly important because it is believed that the current pressures of school accountability might be somewhat responsible for the observed differences, regardless of the specific teacher attitudes towards parental support. Unlike past studies, where teacher attitudes were found be one of the most important variables in influencing school performance, in this study organizational climate was determined to be the most important determinant of school performance. Since K-8 schools in California are currently outperforming MS schools, it is suggested that MS leaders
consider attempts to change their practices in order to alter the perceptions of teachers on their campus and become more similar to those of the K-8 teacher perceptions.

With respect to behavioral issues, Arcia (2005), Schaarsmith (2005), and Lee and Smith (1992), found that K-8 teachers spent more time working with their students in the classroom because there are less behavioral referrals, lower suspension rates, and less peer pressure amongst students. Further, Juvonen et al. (2004) and Connolly et al. (2002) found that students had more teacher and counselor relationships at K-8s which resulted in lower peer victimization. These previous findings of student behavior portray a more positive school climate within the K-8 teacher group, which may also be a reason why K-8 students are outperforming their 8th grade MS peers.

School Performance Differences

The data examined in this study did not provide evidence of any significant differences between the two school types in terms of the CST scores of students at the 6th grade level. This finding was considered a rather surprising and unexpected result as one of the major tenets of the so-called “Transition Theory” that is repeatedly emphasized in the literature claims that achievement drops after there is a transition to a new school (Gronna, 1998; Jones et al., 1984; Offenberg, 2001). Nevertheless, contrary to assertions by a number of researchers (Gronna, 1998; Juvonen et al., 2004; Smith, 2006) about 6th grade academic and developmental problems due to the transition to a MS, this study found no such differences present in terms of achievement scores. However, differences were observed in terms of the CST score of students at the 8th grade level. Some research
has speculated that such results are because K-8 schools are more conducive to learning in the long run, especially because 8th graders in such school structures tend to become mentors (Education World, 2009; Offenberg, 2001), develop higher self-esteem (Education World, 2009; Offenberg, 2001), and instill higher personal efficacy (Becker et al., 2009) motivating them to try harder on performance measures than their MS peers.

The findings of this study are consistent with those reported by Carr (2005) and Offenberg (2001) who also found that students in K-8 schools performed better than MS students at the end of the 8th grade year and once they were in the 9th grade. In a synopsis of the literature comparing K-8 and MS structures, Becker et al. (2009) concluded that “these academic advantages [of K-8 schools] are not the product of a particular grade configuration or even a delay in transition to secondary educational organizations but rather are attributable to higher levels of student self-esteem and sense of personal efficacy fostered by efficacious adult-student relationships [and a more positive teacher climate] in a K-8 environment” (p. 4). Results from past research also suggest that K-8 students are peer pressured to do well on CST exams in order to be positive role models for their younger schoolmates. Perhaps because MS students do not have this “role model” type pressure at the 8th grade level, they may not try as hard on the CST exams. Thus, it would appear that MS principals and staff should consider developing methods to quickly connect the students to the school (e.g., meetings with elementary teachers for tips) and perhaps even provide extrinsic motivation for the students to do their best on the CST exams as they have less time to build intrinsic motivation and less time to get to know the students on a one-to-one basis.
Conclusions

The results of this study help clarify a theoretical perspective about how teacher-perceived cultural processes within different school structures contribute to the explanation of school performance. To date, such concerns have not been adequately addressed in the existing school culture literature on the middle years of schooling. Because 8th grade students situated in K-8 schools outperform their peers in MS settings, it is important to note some similarities and differences in how teacher perceptions of culture explain performance at both school types. In summary this study specifically adds to the theoretical body of knowledge in the following ways:

1. It advances the literature focused on school culture at the middle school level.
2. It verifies that the Heck and Marcoulides (1996b) model provides an accurate explanation pertaining to the overall relationship between school culture and academic achievement as associated with both K-8 and middle school grade-level configurations.
3. It provides support concerning the construct validity of the originally-proposed Heck and Marcoulides (1996b) model across both the K-8 and MS structures.
4. It determines that school configuration does play a factor in the magnitude of the effects of a number of variables within the model. Different variables appear important to K-8 teachers in comparison to MS teachers.
5. By comparing magnitude of both the direct and indirect effects of the culture variables on school performance, it offers an explanation of why these differences
occurred and offers suggestions for changes in leadership behavior and school structure that may improve school performance.

This dissertation study focused primarily on how cultural subsystems can directly and indirectly explain school performance, and provides unmistakable direction as to which components should best be targeted by school administrators interested in raising achievement. With all the many responsibilities that are currently placed on principals’ shoulders, and since it is impossible to allocate equal effort and time to all of them, effective principals must understand how the school organization works and what subsystems directly and indirectly affect others in order to be strategic, timely, and forward-looking when making important decisions that impact the organization’s culture. Concurring with Heck et al. (1990), it asserted that principals who spend time developing and changing the school governance (i.e., distributive leadership), school climate (i.e., positive and professional staff collegiality and less student discipline), and instructional organization (i.e., supports collaboration, data driven PLCs, and parent workshops) will have a better chance of increasing school performance.

Limitations and Suggestions for Further Research

This dissertation study focused on culture and how it explains student performance at both middle and K-8 schools. It is possible that a number of other variables not examined in this study may also be responsible for determining student performance (e.g., student backgrounds, family socio-economic status, student attitudes
towards school, etc). Additionally, the sample used in this study did not represent all K-8 and middle schools within Southern California. Instead, this study focused on data obtained from a sample of similar SES type districts in the counties of Los Angeles, San Bernardino, and San Diego. Finally, the survey utilized in this study includes a number of questions that differed somewhat in format from those included in the original study conducted by Heck & Marcoulides (1996b). This may also explain somewhat why different parameter estimates on a number of variable compared to previous research. In addition, the perceptual nature of the teacher survey data might be problematic as teachers can either overstate or understate the conditions of a school when using a numerical scale.

It is suggested that further research should focus on examining the achievement of the same cohort of students at the 9th grade level to determine if the K-8 students continue to outperform their MS peers once they are in high school. Additionally, conducting a longitudinal study of the same schools using the same survey to investigate if changes in teacher perceptions lead to a change in school performance may prove beneficial. Also a longitudinal study examining whether alterations in leadership behaviors raise school performance would be immensely informative. Finally, it is suggested that additional studies in other regions of the country using the same survey and method of analysis would help educators determine the generalizability of the results beyond California schools included in this study.
References


Appendix A

Latent and Observed Variables included in the Survey

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Observed Variable</th>
<th>Question on Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Climate</td>
<td>Social relationships (x_2)</td>
<td>40, 41, 42, 43, 44, 45 (alpha = 0.75)</td>
</tr>
<tr>
<td></td>
<td>Communication open (x_3)</td>
<td>8, 9, 10 (alpha = 0.77)</td>
</tr>
<tr>
<td></td>
<td>Collegiality of teachers (x_4)</td>
<td>20, 21, 22, 23 (alpha = 0.79)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Observed Variable</th>
<th>Question on Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Structure</td>
<td>Bureaucracy (x_5)</td>
<td>2, 3, 4, 5 (alpha = 0.70), 28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Observed Variable</th>
<th>Question on Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Attitudes</td>
<td>Teacher perception of Students (x_6)</td>
<td>35, 36 (alpha = 0.63), 47</td>
</tr>
<tr>
<td></td>
<td>Teacher perception of Parents (x_7)</td>
<td>31, 38, 39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Observed Variable</th>
<th>Question on Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial Processes</td>
<td>Resources available (x_8)</td>
<td>6, 7 (alpha = 0.70), 46</td>
</tr>
<tr>
<td></td>
<td>Responsiveness by principal (x_9)</td>
<td>11, 12, 13 (alpha = 0.86), 14</td>
</tr>
<tr>
<td></td>
<td>Leadership by principal (x_10)</td>
<td>24, 25, 26, 27, 29, 30 (alpha = 0.79)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Observed Variable</th>
<th>Question on Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Values</td>
<td>Time for collaboration (x_11)</td>
<td>32, 33, 34 (alpha = .68)</td>
</tr>
<tr>
<td></td>
<td>Innovation encouraged (x_12)</td>
<td>18, 19 (alpha = .61), 37</td>
</tr>
<tr>
<td></td>
<td>Participate in decision making (x_13)</td>
<td>15, 16, 17 (alpha = 0.60)</td>
</tr>
</tbody>
</table>

Numbers in italics are added to the survey.
Numbers that are bolded are newly constructed questions to ensure each observed variable is composed of three or more items.

Dependent variable School Performance measured by:
2008-2009 CST 8th grade mean scale scores: ELA, Algebra 1, History, Science
Appendix B

The Organization Of The School And Teacher Satisfaction With Their Work Environment

1. The Organization of the School and Teacher Satisfaction with Their Work Environment

With this survey we will focus on teachers’ perceptions of the current student learning environment at their school and how they relate to school performance. Thank you for your help in attempting to improve the education of your middle level students.

Martin O. Gomez

1. In which type of school do you work?

- K-8 School
- Middle School/Junior High

2. Select the button on the scale below that reflects the accuracy of the following statement:

- Teachers have to follow rules at this school that conflict with their best professional judgment.
- Highly Inaccurate
- Somewhat Inaccurate
- Neither Inaccurate or Accurate
- Somewhat Accurate
- Highly Accurate

3. Select the button on the scale below that reflects the accuracy of the following statement:

- Teachers can take little action at this school until a superior approves it.
- Highly Inaccurate
- Somewhat Inaccurate
- Neither Inaccurate or Accurate
- Somewhat Accurate
- Highly Accurate

4. Select the button on the scale below that reflects the accuracy of the following statement:

- Things are tightly controlled here and the best policy is to stick closely to the rules.
- Highly Inaccurate
- Somewhat Inaccurate
- Neither Inaccurate or Accurate
- Somewhat Accurate
- Highly Accurate

5. Select the button on the scale below that reflects the accuracy of the following statement:

- Teachers have 'freedom within limits' at this school; that is, they know what is expected of them but they also have the freedom to be creative.
- Highly Inaccurate
- Somewhat Inaccurate
- Neither Inaccurate or Accurate
- Somewhat Accurate
- Highly Accurate

6. Select the button on the scale below that reflects the accuracy of the following statement:
1. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers are able to get the instructional materials or assistance they need at the time they are needed.</td>
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</tr>
</tbody>
</table>

2. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple, time-saving procedures exist for the acquisition and use of resources (e.g., printing machine, paper, teaching materials, curriculum guides etc.).</td>
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</tbody>
</table>

3. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers always receive information concerning school-related matters first-hand and without ambiguity.</td>
<td></td>
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</tr>
</tbody>
</table>

4. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is effective, two-way communication between teachers and administrators.</td>
<td></td>
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<td></td>
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</tbody>
</table>

5. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are procedures open to me (that are easily followed) for going to a higher authority if a decision is made that seems unfair.</td>
<td></td>
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</tbody>
</table>
12. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
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<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>This school’s administration knows the problems faced by the staff.</td>
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</tbody>
</table>

13. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>The school administration’s behavior towards the staff is supportive and encouraging.</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

14. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers do not hesitate to approach the administration with any school-related problems they may have.</td>
<td></td>
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</tbody>
</table>

15. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>The administration is seldom sympathetic towards personal problems that the teachers face.</td>
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</tr>
</tbody>
</table>

16. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers participate in determining appropriate instructional methods and techniques in this school.</td>
<td></td>
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</tbody>
</table>

17. Select the button on the scale below that reflects the accuracy of the following statement:

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school, teachers participate in determining the type and content of professional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. Select the button on the scale below that reflects the accuracy of the following statement:

While I obviously can't have a vote on every decision that is made in this school that affects me, I do feel that I can have important input into decisions.

18. Select the button on the scale below that reflects the accuracy of the following statement:

In this school, teachers are encouraged to experiment with their teaching rather than conform.

19. Select the button on the scale below that reflects the accuracy of the following statement:

Differences between individuals and groups are considered to contribute to the richness of this school.

20. Select the button on the scale below that reflects the accuracy of the following statement:

Teachers are familiar with the content and specific goals of the courses taught by other teachers in their department and in other subject departments.

21. Select the button on the scale below that reflects the accuracy of the following statement:
<table>
<thead>
<tr>
<th>Statement</th>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
</table>
| Every teacher in this school does his or her own work; there is little concern about coordinating what each teaches.  
22. Select the button on the scale below that reflects the accuracy of the following statement: | ![Highly Inaccurate](image) | ![Somewhat Inaccurate](image) | ![Neither Inaccurate or Accurate](image) | ![Somewhat Accurate](image) | ![Highly Accurate](image) |
| Teachers from one subject area or level respect those from other subject areas or level.  
23. Select the button on the scale below that reflects the accuracy of the following statement: | ![Highly Inaccurate](image) | ![Somewhat Inaccurate](image) | ![Neither Inaccurate or Accurate](image) | ![Somewhat Accurate](image) | ![Highly Accurate](image) |
| When I have a teaching problem, I can get help or advice from other teachers at my school very easily.  
24. Select the button on the scale below that reflects the accuracy of the following statement: | ![Highly Inaccurate](image) | ![Somewhat Inaccurate](image) | ![Neither Inaccurate or Accurate](image) | ![Somewhat Accurate](image) | ![Highly Accurate](image) |
| The administrative team talks openly and frankly with all staff members about school-related matters.  
25. Select the button on the scale below that reflects the accuracy of the following statement: | ![Highly Inaccurate](image) | ![Somewhat Inaccurate](image) | ![Neither Inaccurate or Accurate](image) | ![Somewhat Accurate](image) | ![Highly Accurate](image) |
| The administrative team deals effectively with pressures from outside the school that might interfere with my teaching.  
26. Select the button on the scale below that reflects the accuracy of the following statement: | ![Highly Inaccurate](image) | ![Somewhat Inaccurate](image) | ![Neither Inaccurate or Accurate](image) | ![Somewhat Accurate](image) | ![Highly Accurate](image) |
27. Select the button on the scale below that reflects the accuracy of the following statement:

Kind of school they want and communicate it effectively to the staff.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Inaccurate</td>
<td>Somewhat Inaccurate</td>
<td>Neither Inaccurate or Accurate</td>
<td>Somewhat Accurate</td>
<td>Highly Accurate</td>
</tr>
</tbody>
</table>

28. Select the button on the scale below that reflects the accuracy of the following statement:

The administrative team sets an example by working hard themselves.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Inaccurate</td>
<td>Somewhat Inaccurate</td>
<td>Neither Inaccurate or Accurate</td>
<td>Somewhat Accurate</td>
<td>Highly Accurate</td>
</tr>
</tbody>
</table>

29. Select the button on the scale below that reflects the accuracy of the following statement:

Administrators and teachers collaborate towards making the school run effectively; there is little administrator-teacher tension.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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<tr>
<td>Highly Inaccurate</td>
<td>Somewhat Inaccurate</td>
<td>Neither Inaccurate or Accurate</td>
<td>Somewhat Accurate</td>
<td>Highly Accurate</td>
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</tbody>
</table>

30. Select the button on the scale below that reflects the accuracy of the following statement:

The administrative team stresses teamwork and takes the lead in demonstrating how to work effectively as a team on school-related matters.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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<tbody>
<tr>
<td>Highly Inaccurate</td>
<td>Somewhat Inaccurate</td>
<td>Neither Inaccurate or Accurate</td>
<td>Somewhat Accurate</td>
<td>Highly Accurate</td>
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31. Select the button on the scale below that reflects the accuracy of the following statement:

Parents promote community involvement by being involved

<table>
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<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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<tbody>
<tr>
<td>Highly Inaccurate</td>
<td>Somewhat Inaccurate</td>
<td>Neither Inaccurate or Accurate</td>
<td>Somewhat Accurate</td>
<td>Highly Accurate</td>
</tr>
</tbody>
</table>
32. Select the button on the scale below that reflects the accuracy of the following statement:

Discussion of issues in teaching and learning is a regular part of our school staff/in-service meetings.

33. Select the button on the scale below that reflects the accuracy of the following statement:

Teachers can always find time during a regular school day to share teaching ideas or materials with at least two or three teachers.

34. Select the button on the scale below that reflects the accuracy of the following statement:

Teachers in the school are actively involved in determining school needs and strategies to improve instruction.

35. Select the button on the scale below that reflects the accuracy of the following statement:

Many of the students that I teach are not capable of learning the material I am supposed to teach.

36. Select the button on the scale below that reflects the accuracy of the following statement:

The attitudes and habits that my students bring to class greatly
reduce their chances for academic success.

37. Select the button on the scale below that reflects the accuracy of the following statement:

I am actively involved in improving my classroom teaching through pursuing alternative instructional strategies that work with different groups of students.

38. Select the button on the scale below that reflects the accuracy of the following statement:

Parents are involved on a regular basis in helping out with the school's program.

39. Select the button on the scale below that reflects the accuracy of the following statement:

Most of my students' parents support what I do in class.

40. Select the button on the scale below that reflects the accuracy of the following statement:

Teachers help and support each other.

41. Select the button on the scale below that reflects the accuracy of the following statement:

Teachers socialize with each other on a regular basis.
### Teachers willingly spend time after school with students who have individual needs.

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<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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</tbody>
</table>

Select the button on the scale below that reflects the accuracy of the following statement:

- **Highly Inaccurate**
- **Somewhat Inaccurate**
- **Neither Inaccurate or Accurate**
- **Somewhat Accurate**
- **Highly Accurate**

43. The administrative team treats teachers as equals.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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</table>

Select the button on the scale below that reflects the accuracy of the following statement:

- **Highly Inaccurate**
- **Somewhat Inaccurate**
- **Neither Inaccurate or Accurate**
- **Somewhat Accurate**
- **Highly Accurate**

44. School is a nice place to be—I feel needed and wanted here.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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</tbody>
</table>

Select the button on the scale below that reflects the accuracy of the following statement:

- **Highly Inaccurate**
- **Somewhat Inaccurate**
- **Neither Inaccurate or Accurate**
- **Somewhat Accurate**
- **Highly Accurate**

45. Teachers are proud of our school.

<table>
<thead>
<tr>
<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
<th>Somewhat Accurate</th>
<th>Highly Accurate</th>
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Select the button on the scale below that reflects the accuracy of the following statement:

- **Highly Inaccurate**
- **Somewhat Inaccurate**
- **Neither Inaccurate or Accurate**
- **Somewhat Accurate**
- **Highly Accurate**

46. My school has the money to provide resources to meet the needs of the middle grade students (socio-emotional, academic, physical).

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<th>Highly Inaccurate</th>
<th>Somewhat Inaccurate</th>
<th>Neither Inaccurate or Accurate</th>
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Select the button on the scale below that reflects the accuracy of the following statement:

- **Highly Inaccurate**
- **Somewhat Inaccurate**
- **Neither Inaccurate or Accurate**
- **Somewhat Accurate**
- **Highly Accurate**

47. My students treat each other and the staff with respect. This is the reason there are few disciplinary problems and suspensions at my school.

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Appendix C

K-8 and/or Middle School Principal
Southern California

Dear K-8 or Middle School Principal,

I am writing to introduce myself and to ask your permission to conduct my dissertation research at your site in the near future. I am a graduate student from the Graduate School of Education (GSOE) at the University of California, Riverside (UCR) and I am investigating K-8 and middle school grade configured schools in Southern California. The study has three purposes: (1) to examine the fit of a previously validated school culture model proposed by Heck & Marcoulides (1996) concerning how teacher perceptions of school culture affect student achievement across K-8 and middle schools, (2) to understand how K-8 and middle schools exert cultural influences towards performance (Heck & Marcoulides, 1990), and (3) to determine which middle level structure (K-8 or middle school) is outperforming the other on standardized exams at the 6th and 8th grade levels.

The survey will be sent to teachers via email and will take about 10-25 minutes to complete. The teachers will fill out the survey at a personally convenient time and place. I will provide all of your teachers that will be filling out the survey with a raffle ticket that I will ask for your secretary to place in teacher boxes as an incentive to complete the survey. Three weeks after the survey is sent out, I will raffle off two Apple iPod 8 GB. The teacher with the winning raffle ticket will then email me their contact information, address and phone number.

I will be careful to protect all participants’ identities and confidentiality during the course of my research. Further, no individual school will be identified in the study. Instead, schools will be grouped with several other similar schools which will make it impossible to track a teacher’s answers on the survey. In addition, only I as the primary investigator will have access to the data once the survey is completed.

As this will be the first quantitative research that will compare K-8 and middle schools in Southern California, your school’s participation is vital in attaining enough data to complete the research. Your school district was chosen because of its different middle school structures which makes it unique in California and that is why your teacher responses are vital to the success of the research. Teachers will be informed that they do not have to show the principal or the principal’s secretary a copy of their completed survey. It is essential that I receive at least ten teacher responses from each school site in order to use your school’s data in the research.

Your school district office administration has already approved your school’s participation in this research. If you have questions about the project, please feel free to ask them. You can reach me, Martin O. Gomez, UC Riverside Graduate Student at 951-809-3974 or mog2311@hotmail.com. Also, you can email my advisor at the University of California, Riverside, Dr. George A. Marcoulides through email at george.marcoulides@ucr.edu. If you have any questions or concerns about your rights as
a research participant, please contact the UCR Human Research Review Board at (951) 827-4861, or IRB@ucr.edu.

Sincerely yours,

Martin O. Gomez
Graduate School of Education
University of California, Riverside
Assistant Principal, Fontana High School
909-357-5500 ext 6510
Appendix D

K-8 Teachers and/or Middle School Teachers
Southern California

Dear K-8 and/or Middle School Teachers,

I am writing to ask you to participate in a small research project that will be conducted at your school this year. The study has three purposes: (1) to examine the fit of a previously validated school culture model proposed by Heck & Marcoulides (1996) concerning how teacher perceptions of school culture affect student achievement across K-8 and middle schools, (2) to understand how K-8 and middle schools exert cultural influences towards performance (Heck & Marcoulides, 1990), and (3) to determine which middle level structure (K-8 or middle school) is outperforming the other on standardized exams at the 6th and 8th grade levels.

Given my focus, I will ask for your help in filling out a school culture survey. The survey will take about 10-25 minutes to complete and will be sent to you electronically to be carried out at your discretion. As a token of my appreciation in exchange for the time that you will need to fill out the survey, please accept the raffle ticket that is attached as an incentive to complete the survey. Four weeks after the survey is sent out I will email you the numbers of the winning raffle tickets. The teachers with one of the two winning raffle ticket will then email me their contact information and address in order to receive an Apple iPod 8 GB.

Your school district was chosen because of its different middle school structures which make it unique in California and that is why your responses are essential to the success of the research. The information that you will provide is vital as I need to gather information from at least twelve middle level teachers at the school site. However, your participation in this project is voluntary; you may withdraw your consent at any time without affecting your status as a teacher at the school or in the district in any way. I will be careful to protect all participants’ identities and confidentiality during the course of the research. Further, no individual school will be identified in the study. Instead, schools will be grouped with several other similar schools which will make it impossible to track a teacher’s answers on the survey. In addition, only I as the principal investigator will have access to the data once the survey is completed. The principal understands that he/she will not have to see your completed survey nor will they know which staff member completed the survey.

If you have questions about the project, please feel free to ask. You can reach me, Martin O. Gomez, at 951-809-3974 or mog2311@hotmail.com. Also, you can email my advisor at the University of California, Riverside, Dr. George A. Marcoulides through email at george.marcoulides@ucr.edu. If you have any questions or concerns about your rights as a research participant, please contact the UCR Human Research Review Board at (951) 827-4861, or IRB@ucr.edu.
Sincerely yours,

Project Team
Martin O. Gomez
Graduate School of Education
University of California, Riverside
Assistant Principal, Fontana High School
909-357-5500 ext 6510
Appendix E
Survey Consent

You have been provided information via a pre-notification letter by Martin O. Gomez that explains the details of the research project he wishes to conduct at your school and you agree to participate in it. By clicking on the link below you are providing consent to participate in the research and you agree to participate in the survey that will last 10-25 minutes.

You understand that Martin O. Gomez will make all efforts to protect your identity (including name, school, and district) and your confidentiality. You have been assured that your consent is voluntary and that refusal to participate or withdraw your consent at any time will not affect your status in the school or district in any way. You have been assured that all information acquired in the study will be confidential and that no participant’s name, school name, or school district name will be included in any verbal or written reports. Further, no individual school will be researched or identified independently in the study. Instead, schools will be grouped with several other similar schools which will make it impossible to track a teacher’s answers on the survey. In addition, only Martin O. Gomez will have access to the data once the survey is completed.

The information collected from you and your peers is important as it will test several hypotheses comparing the culture variables across different types of middle school structures and how they influence school performance. The school district in which you are employed was chosen because it is one of the few districts which offers different middle school structures in southern California and that is why your responses are vital to the success of the research. Also, you should keep the raffle ticket that was sent earlier as you have a chance of winning one of two Apple iPod 8 GB that will be raffled off approximately three weeks from now.

If you have questions at any time regarding the study you can contact graduate student Martin O. Gomez at 951-809-3974 or email: mog2311@hotmail.com. Also, you can email his advisor at the University of California, Riverside, Dr. George A. Marcoulides at george.marcoulides@ucr.edu

If you have any questions or concerns about your rights as a research participant, you can contact the UCR Human Research Review Board at (951) 827-4861, or IRB@ucr.edu.

Please click on the link below that will send you to the research survey. Thank you very much for your time.

Link to Surveymonke.com research.
Appendix F
Reminder Letter

Dear K-8 or Middle School Teacher:

Over the past few weeks you have been invited to participate in a study that seeks to better understand the similarities and differences between culture and student performance across K-8 and middle schools by completing a brief web survey.

I would like to take this opportunity to sincerely thank you for your time and attention. If you have been unable to participate before this point, I urge you to complete the survey that was sent to your email account so that your input may be included in the analyses. Your participation ensures that a robust sample has been included in the study and that the analyses include the diverse perspectives of teachers across K-8 and middle schools.

If you have questions at any time regarding the study you can contact graduate student Martin O. Gomez at 951-809-3974 or email: mog2311@hotmail.com. Also, you can email his advisor at the University of California, Riverside, Dr. George A. Marcoulides at george.marcoulides@ucr.edu.

If you have any questions or concerns about my rights as a research participant, you can contact the UCR Human Research Review Board at (951) 827-4861, or IRB@ucr.edu.

Please click on the link below that will send you to the research survey. Thank you very much for your time.

Link to Surveymonkey.com research.