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CONTRIBUTORY FACTORS TO TEACHERS' SENSE OF
COMMUNITY IN PUBLIC URBAN ELEMENTARY SCHOOLS

By

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Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
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SETON HALL UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES
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Abstract

CONTRIBUTORY FACTORS TO TEACHERS' SENSE OF COMMUNITY IN PUBLIC URBAN ELEMENTARY SCHOOLS

The purpose of this study was to investigate factors that contribute to teachers' sense of community within public, urban, elementary schools. Because previous research has touted the benefits of teacher communities within schools (Kruse, 2001; Leana & Pil, 2006; Ware & Kitsantas, 2007) educational leaders are challenged with creating school environments that foster a sense of commitment and cohesiveness among staff within our current accountability climate in schools. Research that focuses on best practices of successful school principals in cultivating such things as teacher communities is scarce at the elementary level (Crum & Sherman, 2008). This study employed a descriptive, quantitative, cross-sectional research design. The data used for this analysis was from public elementary teachers' responses to specific questions from the 2003-2004 Schools and Staffing Survey (SASS) administered through the United States Department of Education's National Center for Educational Statistics (NCES). The strength in using the SASS is that it provides a large sample of elementary teachers across the United States. In the first part of the study the independent variables of principal leadership behaviors, collaborative school structures and teacher empowerment were examined to see their influence on the dependent variable, teachers' sense of community. For the second part of the study, teachers' sense of community within a building was viewed as the

independent variable to see the effect this sense of community had on teacher satisfaction and on their perception of state and district content standards (dependent variables). Hierarchical regression analysis was used on the data to determine relationships and predictability of the variables. Of all the non-policy amenable and independent variables explored, principal leadership activities were by far the strongest predictor of teachers' sense of community. The principal leadership activities variable was also found to be the strongest predictor of satisfaction with teaching and perception of state and district standards.

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TABLE OF CONTENTS

Abstract.....	iii
Acknowledgements.....	v
List of Tables	ix
List of Figures	x
I. INTRODUCTION	1
Statement of the Problem.....	6
Research Questions.....	7
Significance of the Problem.....	7
Definition of Terms	8
Limitations	9
Delimitations.....	10
II. LITERATURE REVIEW	11
Viewpoints on Teacher Community.....	12
The Role of Bureaucracy and Accountability in Teacher Commitment and Community	18
Teacher Empowerment through Control and Influence within the School Structure.....	24
The Role of Principal Leadership	29
III. METHODOLOGY AND PROCEDURE	39
Research Design.....	39
Sample	39
Instrumentation.....	40
Control Variables.....	41
Independent Variables	41
Questions that measure “Principal Leadership Behaviors”	42
Questions that measure “Facilitating/Collaborative School Policies and Structures”	43
Questions that measure “Teacher Empowerment”	43
Outcome Variables.....	44
Questions that measure “Teacher Sense of Community”	45
Questions that measure “Satisfaction with Teaching”	45
Questions that measure “Impact of State and District Standards”	46
Mediation Analysis	48
Mediation Analysis for Research Question 2	48

Mediation Analysis for Research Question 3	49
Data Collection Techniques	51
Data Analysis	51
IV. ANALYSIS OF DATA	54
Presentation of Descriptive Characteristics of Respondents	55
Latent Variables Created	56
Normality Analysis	57
Exploration of Research Questions	59
Analysis for Research Question 1	59
Analysis for Research Question 2	65
Analysis for Research Question 3	71
Analysis for Research Question 4	76
Analysis for Research Question 5	79
Summary of Findings	81
V. FINDINGS, CONCLUSIONS AND IMPLICATIONS	83
Summary of Study	84
Findings	87
Research Question 1	88
Research Question 2	88
Research Question 3	90
Research Question 4	91
Research Question 5	91
Implications	92
Future Research	95
REFERENCES	97
APPENDICES	
Appendix A: Cronbach's Alpha Item Analysis for Teachers' Sense of Community	104
Appendix B: Cronbach's Alpha Item Analysis for Principal Leadership Activities	106
Appendix C: Cronbach's Alpha Item Analysis for Teacher Empowerment ...	108
Appendix D: Cronbach's Alpha Item Analysis for Satisfaction with Teaching	110

LIST OF TABLES

Table 1. Summary of Independent and Outcome Variables Used in Analysis ...	47
Table 2. Descriptive Statistics for Non-policy Amenable Variables for the Sample of Urban Elementary Public School Teachers	55
Table 3. Skewness Measures for Latent Variables.....	58
Table 4. Transformation of Negatively Skewed Principal Leadership Activities	59
Table 5. Test of Collinearity of Non-Policy Amenable Variables	61
Table 6. Hierarchical Regression Analysis of Predictors of Teachers' Sense of Community with Principal Leadership Activities as Independent Variable.....	63
Table 7. Hierarchical Regression Analysis of Predictors of Teachers' Sense of Community with Facilitating/Collaborative School Structures as Independent Variable.....	68
Table 8. Hierarchical Regression Analysis of Predictors of Teachers' Sense of Community with Principal Leadership Activities as Independent Variable and Teacher Empowerment as a Mediator.....	73
Table 9. Hierarchical Regression Analysis of Predictors of Satisfaction with Teaching.....	77
Table 10. Hierarchical Regression Analysis of Predictors of Teachers' Perception of State and District Standards.....	79

LIST OF FIGURES

Figure 1. Mediating effect of principal leadership activities on the relationship between facilitating school structures and teachers' sense of community	49
Figure 2. Mediating effect of teacher empowerment on relationship between principal leadership behaviors and teachers' sense of community	50
Figure 3. Mediating effect of principal leadership activities on the relationship between facilitating school structures and teachers' sense of community with path beta values included	70
Figure 4. Mediating effect of teacher empowerment on relationship between principal leadership behaviors and teachers' sense of community with path beta values included	75

Chapter I

INTRODUCTION

A goal for any educational leader is to create a successful school environment that fosters a sense of commitment and cohesiveness among staff. The power of a positive school culture that is characterized by a sense of collective responsibility for students and collaborative sharing and reflecting among teachers cannot be underestimated (Kruse & Louis, 1999). The benefits of strong teacher communities within schools have been studied by various researchers in the past (Kruse, 2001; Leana & Pil, 2006; Ware & Kitsantas, 2007). The presence of teacher professional communities of practice has also been shown to mediate teachers' response to reform policies (Gallucci, 2003). This finding is particularly interesting given that schools are now in the midst of drastic reform efforts in response to No Child Left Behind legislation.

Sergiovanni's (2005) words provide insight:

Leaders have an important responsibility. If their hopefulness is based on faith in a set of assumptions and, if these assumptions become shared by others in their school community, then a powerful force of ideas will be created. These ideas provide the basis for a school becoming a community of hope and can fuel the school's efforts to turn hope into reality. (p. 115)

In the current era of accountability resulting from the No Child Left Behind Act (NCLB), teachers find themselves faced with new challenges and greater demands than ever before. Many critics of the current outcome based

bureaucratic accountability systems fear that these reform efforts have a negative effect on teachers' work, increase authoritarianism within school structures, and diminish teacher professionalism (Mathison & Freeman, 2003). In a study of elementary schools in upstate New York, researchers found that newly imposed outcomes based bureaucratic accountability systems tested teachers' resolve and left them frustrated. Similarly, Margolis and Nagel (2006) found that an increase in teacher stress and exhaustion associated with change efforts in schools was related to the extent to which teachers perceived the changes to be imposed rather than communally owned. Teachers in this study were more resilient when they felt valued and were acknowledged by their principals regarding the difficulties of their work. As the demands and difficulties of teachers' work become more complex as a result of NCLB, principal leadership and support becomes more important in mediating teacher stress associated with these obligatory changes.

Much has been written on the influence principal leadership behaviors have on staff motivation, commitment, and working conditions (Blase & Blase, 2000; Leithwood, Harris & Hopkins, 2008; Quinn, 2002). Hoy and Sweetland (2001) describe a compromise between hierarchical control and teacher commitment in their research on enabling bureaucracy. Within an enabling bureaucracy, formalization and centralization are more flexible and leaders are aware of the delicate balance between authority and empowerment and understand their roles as enabling leaders within these hierarchical structures (Sinden, Hoy & Sweetland, 2004). In the most general sense, an enabling

bureaucracy is defined as “a hierarchy that helps rather than hinders and a system of rules and regulations that guides problem solving” (Hoy & Sweetland, 2001, p. 49). Enabling bureaucracies are characterized in part by leaders’ willingness to be more flexible in the areas of centralization and formalization. To develop a cohesive staff where trust is shared within the newly developed stringent accountability climate, the nuances of principal leadership need to be analyzed.

Research that analyzes the effects of enabling bureaucratic structures, supports, and leadership behaviors in schools after NCLB’s outcome based accountability mechanisms have been put in place is scant. Two recent studies were done at the high school level in which “enabling bureaucracy” was developed into a construct that was related to faculty trust in colleagues and in trust and positive relationships with the principal (Hoy & Sweetland, 2001; Sinden, Hoy & Sweetland, 2004). Research that focuses on the effects of facilitating structures and supports at the elementary level after NCLB’s outcome based accountability mechanisms have been put in place is relatively non-existent.

Using pre-NCLB data from the 1999-2000 Schools and Staffing Survey administered through the United States Department of Education’s National Center for Educational Statistics (NCES), Weathers (2006) assessed a number of constructs as they related to perceptions of teacher community. Of all the variables studied, he found that teachers’ perception of certain leadership activities of their principal had the strongest statistically significant effect on

teachers' overall sense of community. Weathers also found that state measures to hold schools individually accountable had no statistically significant effect on teachers' sense of community and that state initiated bureaucratic accountability to impose instructional standards on teachers actually had a positive effect on teachers' sense of community. This is an interesting finding at a time when there was not a tremendous amount of requirements placed on teachers. Finally, Weathers found that teachers who perceived more empowerment over classroom and policy decision making reported a higher sense of community amongst their fellow teachers. Furthermore, Weathers (2006) argued that true professional accountability could be achieved if the goals of teacher communities were positively influenced by their school leaders.

The research presented here will take this concept further by using updated post-NCLB data to clarify the role of principal leadership behaviors in promoting teacher communities within the recently formed bureaucratic accountability structures resulting from NCLB. The data used for this study was from the first administration of the Schools and Staffing Survey (NCES, 2003 - 2004) after NCLB was put into place. This time period was marked by the implementation of a higher accountability system in public schools, so responses were from teachers under increased pressure "from above" within a bureaucratic system. The examination of teachers' sense of community and staff cohesiveness that is offered in this study will add another dimension to the conceptual framework of enabling structures. The study presented here bridges the gap in the literature that defines teachers' sense of community as an element

within an enabling bureaucracy because of its positive effects on teacher satisfaction and commitment. By viewing teachers' sense of community as an additional component in the analysis of enabling structures, the result may be an even more facilitating environment where trust is enhanced and vision is shared. This researcher posits that teachers' sense of community can be fostered by leaders (principals) within a bureaucratic system (schools) during a highly accountable period (post-NCLB), and what results is a more enabling climate leading to positive outcomes (i.e. teacher satisfaction). This study will also offer an analysis on how principal leadership behaviors play a role both directly and indirectly on teachers' sense of community when planned collaboration and empowerment structures are in place.

This study will employ secondary analysis of restricted-use data from the 2003-2004 Schools and Staffing Survey (SASS) conducted by the United States Department of Education's National Center for Educational Statistics (NCES). The data used for this study will be from public elementary teachers' responses to specific questions from the survey. The strength in using the SASS is that it provides a large sample of elementary teachers across the United States. Since all public elementary schools included in this sample had accountability requirements as a result of NCLB, the findings will be compared to the results of the study done by Weathers (2006), which used pre-NCLB data from the Schools and Staffing Survey to analyze facilitating features in schools that influence teacher communities. For the first part of this study the independent variables of principal leadership behaviors, collaborative school structures and teacher

empowerment will be examined to see their influence on the dependent variable, teachers' sense of community. For the second part of the study, teachers' sense of community within a building will be viewed as the independent variable to see the influence this sense of community has on teacher satisfaction as well as on teachers' perception of state and district content standards.

Statement of the Problem

Given the current accountability climate resulting from the No Child Left Behind Act, school leaders have responded in various ways to the demands placed on their schools and on their teachers. The use of appropriate leadership skills and supports is imperative for a principal to lead and motivate his/her staff in achieving their goals in our current outcome-based system. Because previous research has touted the benefits of teacher communities within schools (Kruse, 2001; Leana & Pil, 2006; Ware & Kitsantas, 2007), educational leaders are challenged with creating school environments that foster a sense of commitment and cohesiveness among staff within this accountability climate. Research that focuses on best practices of successful school principals in cultivating such things as teacher communities in a post-NCLB nation is scarce and relatively non-existent at the elementary level (Crum & Sherman, 2008). In an effort to fill this gap, the overarching problem statement for this study will be to investigate the contributory factors to a teacher's sense of community in public urban elementary schools in the United States within this current era of accountability. Taken further, this study will also analyze the relationship between teachers'

sense of community and its influence on teacher satisfaction and their perceptions of state or district content standards.

Research Questions

1. What influence do principal leadership behaviors/activities have on teachers' sense of community?
2. What influence do facilitating/collaborative school policies and structures that promote teacher interaction have on teachers' sense of community?
3. What relationship exists between teacher empowerment through the context of teachers' perception of their influence and control in decision making and their sense of community?
4. How does teachers' sense of community within their building influence their satisfaction with teaching?
5. What is the influence of teacher communities on how teachers perceive the effects of state and district content standards?

Significance of the Problem

Over the past 10 years, there has been an increase in the prevalence of accountability measures and school-wide reform efforts through the implementation of NCLB mandates. A result of NCLB has been the development of a high-stakes environment within our schools characterized by higher levels of stress among educators. In teacher professional literature, there exists a

relatively untested belief that formal hierarchies in the form of principal leadership and bureaucratic accountability run counter to teacher's sense of community (Weathers, 2006). An appropriate response from principals amidst this tighter bureaucratic accountability system is the use of a more facilitating type of approach to principal leadership, and one that promotes a collaborative culture. The study presented here will attempt to bridge the gap that exists in the body of knowledge that addresses principal's leadership influence in fostering teachers' sense of community following NCLB, and will also investigate the effects the presence of teacher communities has on teacher satisfaction and response to state and district standards. The following is a list of key concepts that are discussed and analyzed throughout this study along with pertinent definitions. The purpose for providing these definitions is to clarify the meanings of the terms used throughout this research.

Definition of Terms

community – a shared culture among individuals where the beliefs and values of members are aligned and where individuals feel a responsibility and an accountability to other members of the community and organization.

empowerment - a sense of being able to influence and control aspects of decision making, policy development and outcomes in an organization.

accountability - existence of hierarchal framework, specific measures, standards or requirements imposed on individuals within an organization.

leadership - the ability of an individual to influence others' decision making and actions within an organization.

Limitations

This study was limited by the fact that the sample used was public urban elementary school teacher responses to the 2003-2004 Schools and Staffing Survey (NCES, 2003-2004). The purpose of limiting the sample to urban elementary schools was to compare some of the findings with the Weathers (2006) study, which used 1999-2000 SASS data from urban elementary schools to study aspects of teachers' sense of community before NCLB was enacted. Data from urban elementary schools was used because of the belief that a sense of community and commitment was particularly important in an urban setting where teacher turnover is more common, and because relatively little research in this area of interest exists at the elementary level. Since urban elementary schools were studied, generalizing to broader populations would be inappropriate. While data from the SASS provides a robust sampling of elementary schools across the United States, the use of SASS data limits the number of possible indicators to measure the constructs discussed in the research questions of this study. Undoubtedly there are other indicators that could be used to measure these constructs, but these indicators are beyond the scope of questioning included in the SASS.

Delimitations

Since the SASS data does not include student achievement information, the study proposed here does not specifically link teacher communities to higher student achievement. The review of literature below outlines previous research that links community and culture to higher student achievement. This study reviews the effects of teacher empowerment, leadership behavior and facilitating/collaborative school structures on teacher community, with the assumption that effective teacher communities positively affect student achievement.

Chapter II

LITERATURE REVIEW

Since this study examines and compares various influences on teachers' sense of community, the literature presented here is divided into sections that focus on previous research done in the areas of interest. The first section provides an overview of teacher communities and the benefits they have on the educational process. The next section explores the role of accountability and bureaucratic mechanisms in schools and some of the effects the No Child Left Behind Act has had on teachers across the United States. The literature review will then present findings from various studies that focus on teacher empowerment through participation in the decision making process. Finally, a summary of the research on principal leadership behaviors and activities will be presented.

The literature to be reviewed includes a combination of both empirical and theoretical research. The concept of enabling bureaucratic structures will be explored because enabling bureaucracies are characterized by commitment, collaboration, communication, and job satisfaction. The research presented here explores and expands upon this theoretical concept of enabling bureaucratic structures by investigating the prevalence of teachers' sense of community as a form of collaborative commitment. The role that principal leadership behaviors play in fostering teacher communities and trust will also be discussed throughout the literature review.

Viewpoints on Teacher Community

The concept of teacher community, its importance, and its positive effects have been studied and written about by researchers in a variety of forms. Different terms have been used to identify and describe what a teacher community encompasses. Fullan (2002) discussed the need for collaborative opportunities in the form of teacher “professional learning communities” in order for true knowledge development to occur. Fullan made the claim that individual skills were not enough for teachers to become instructionally intelligent; teachers had to also be socially smart. Only through the social, cohesive process of collaboration with others can information truly transform into knowledge (Brown & Duguid, 2000).

Within schools, the existence of teachers' sense of community varies; teachers may report differences as they relate to sense of community with students, among co-workers, and with site administrators. Royal and Rossi (1999) used data from surveys administered to faculties of three public high schools to measure school differences in these sense-of-community measures. Of the variables studied, the strongest predictors of teacher community that emerged among fellow teachers and with school administrators included teachers' participation in team teaching and their perceptions of administrators' support for innovation and experimentation of new teaching ideas.

Development of professional learning communities has become a component of many school reform efforts to foster collegial, collaborative work and offset the current individualism and bureaucracy that characterize many

schools today. A hope was that the professional learning community initiative would encourage exchange of best ideas and best practices, and that by being more tightly bound to each other, teachers would show more commitment to each other and to the school's mission. But for professional learning communities to truly have an effect on instructional practices within a building, some have argued that interaction among members must go beyond the simple quick exchange of information currently practiced among many teacher groups (Servage, 2008). The scope and depth of discussions among community members can vary greatly from school to school. When the organization members focus on the types of problem solving and knowledge acquisition that has the potential to actually change the culture rather than simply applying solutions and modifications to existing processes then the organization goes through what is characterized as "double loop learning" (Argyris, 1998). Knowing that effective teacher communities can have a profound effect on educational progress within a school, Servage (2008) challenged professional learning communities to delve deeper in their interactions with each other and to move beyond their current task-oriented behavior. Servage (2008) encouraged teachers to take on more transformative roles by engaging in true collective reflection and visioning for the organization.

The process of developing shared values coupled with ongoing reflection and discussion among organizational members is essential in achieving true communal school systems (Kruse, 2001). A community's role in clarifying and supporting a common vision throughout the organization cannot be understated.

In a study of school districts where teachers participated in continuous improvement planning teams, teachers reported that through the purposeful work of the team, there existed a clearer focus and an increase in the trust, respect, and internal expertise among its members. Teacher participants who were interviewed noted that the deliberate development of a shared vision by the team was essential to the growth of the teacher community and subsequently guided their dialogue and actions (Kruse, 2001).

Educational researchers have used the term internal social capital, an idea borrowed from economic theory, to describe ways of measuring teacher community (Leana & Pil, 2006). Internal social capital is measured by the quality of the relationships among members of an organization. The three facets of internal social capital include: structural (the connections and sharing of information among actors), relational (the development of trusting relationships through interactions) and cognitive (the ability to develop a common set of goals and shared vision for an organization through collective interaction) (Nahapiet & Ghoshal, as cited in Leana & Pil, 2006). A study done in 88 urban schools over an 18-month period found that levels of internal social capital, as measured by teacher surveys, had a direct effect on reading achievement (Leana & Pil, 2006). Using data from the 4 year Distributive Leadership Project, Spillane, Hallett and Diamond (2003) studied how teachers constructed others within the organization as instructional leaders, and looked at how these selected leaders affected their pedagogical choices. Teachers in this study reported that social capital (the measurement of their social networks and connections) had guided their choices

on whom they constructed as the instructional leaders in their building and that the leaders that emerged had greatly influenced teachers' efforts to learn about and change their instructional practices.

From this result we see that the presence of a teacher community can influence the direction in which a school goes because with whom one interacts can have a powerful influence on a teacher's instructional choices. Gallucci (2003) found that characteristics of communities within elementary schools made a difference on how teachers responded to reform policies. Teachers that came from stronger communities were able to integrate mandated curriculum into their practice easier and align their work with the requirements of the mandates. Weaker communities responded more superficially to these mandates. Teacher communities in this case acted as mediators of teacher responses to standards based reforms.

It appears clear that simply having a professional learning community in place does not guarantee that effective exchange will take place; the mere existence of a social network does not guarantee that positive, constructive interaction will occur. Social network analysis investigates the features and extent of teachers' social relations by studying patterns of interpersonal communication and identifying the ties between individuals and the network as a whole (Coburn & Russell, 2008). Policy can influence the nature and quality of teachers' social networks by making appropriate provisions for the structure of the network along with setting up frameworks to promote meaningful dialogue that relates to the initiatives in progress. Coburn and Russell (2008) studied two

districts that were in the process of implementing standards-based mathematics curriculum and that were employing different policy provisions aimed at fostering professional community. Through case study, observation, and survey analysis, the authors found that there existed differences in the way the coaches were chosen, trained and used in each of the districts. In the school that had clearly delineated criteria for teachers to follow in choosing their coach from among their network, along with a clear outline of the coach's requirements and responsibilities, teachers reported increased accessibility of information and expertise among their group that was crucial for implementation of the reform. Variation in the routines of interaction, and disparity in outlined expectations of topics to be discussed influenced the depth of interaction among teachers in each of the two schools. Overall, the school with more bureaucratic mechanisms in place to influence the scope and structure of social relations resulted in a more effective teacher community (Coburn & Russell, 2008).

Collective efficacy is a concept that is often linked to teacher communities because it refers to the individual's belief in the group's capabilities, judgment, effort and cohesiveness in influencing the types of futures desired through collective action (Bandura, 2000). Collective efficacy has recently received increased attention in educational studies because of its positive effects on such things as student achievement on test results (Goddard, Hoy & Hoy, 2004) and teacher commitment to teaching (Ware & Kitsantas, 2007). Because strong teacher communities have shared goals, engage in collective construction of knowledge, and benefit from open sharing and communicating, learning

communities play an important role in increased collective efficacy (Ware & Kitsantas, 2007).

For the purposes of this study, teacher community will be defined by the perception among teachers that a community exists among its members. This sense of community is formed around the confidence that colleagues share the same beliefs and values regarding the mission of the school, that teachers generally work together, and that teachers within the organization feel a collective responsibility for all students. Cannata (2007) hypothesized that elementary charter schools would generally score higher in teacher community measures as compared to traditional public elementary school because of the focused school mission and increased teacher control over the hiring process evident in most charter schools. Using data from the Schools and Staffing Survey, Cannata (2007) found that there was very little difference in teacher community measures between charter and traditional elementary schools and that the little difference that did exist was mediated by the effect of a supportive principal, teacher decision making influence and school size. In order to increase the presence of effective teacher communities within our schools, there is a need for increasing teachers' involvement in collaborative decision making, and an "exploration of the specific attributes and behaviors of principals that are successful in developing and maintaining teacher professional communities" (Cannata, 2007, p. 23).

The literature reviewed offered different perspectives on teacher communities along with varied descriptions of the types and extent of interactions

among its members. Teacher communities can play an important role in promoting collegiality within the organization and boosting morale as members experience increased feelings of belonging and commitment. The positive implications associated with these teacher groups were also explored. But what also emerged from the literature on teacher communities is that the mere presence of regular interactions among teachers does not necessarily guarantee positive outcomes, and that other factors may influence and mediate teachers' sense of community.

The Role of Bureaucracy and Accountability in Teacher Commitment and Community

There have been competing views regarding proper educational reform, one that views teacher commitment and communal control as paramount to a successful system, and one that views accountability via formal leadership and state bureaucracy as the solution. Supporters of the teacher commitment approach, where organizational learning is designed around professional teacher communities, reject policy reforms that stress top-down control and hierarchical accountability measures (Randerlee, 2006). In a study done by Margolis and Nagel (2006) teachers responded that they experienced higher levels of physical exhaustion on the job when they perceived that changes were being imposed from above rather than developed from within. Teachers in this study reported higher levels of stamina when they felt valued and when they trusted the school leadership. Among the supportive behaviors that principals exhibited to increase

morale was directly praising the daily work of teachers in the school. Principal leadership played a role in shaping the environment that either enhanced or hindered teachers' work, even within a hierarchal system.

Many believe that the mandates imposed by the No Child Left Behind Act of 2001, which clearly outlined requirements for the implementation of accountability measures in public schools across the nation, have undermined teachers' ability to do their job, challenged their professionalism, and limited their sense of efficacy (Mathison & Freeman, 2003). The underlying rationale of NCLB is based on the assumption that sanctions will motivate staff and focus efforts on student academic outcomes. According to McDermott (2007), who did a recent analysis of the enactment of educational accountability policies in four different states, these policies ignore the current capacity of schools to enact standards based reform, which in turn affects their response to the demands of these accountability systems.

Critics often question the ethics behind NCLB and "whether the well-being of students in socially problematic environments is best served by relying on more or less stringent accountability policies" (Torres, 2004, p. 252). Since so much more emphasis and resources are going towards programming to increase achievement in math and English, access for students to other programs such as art, music, and technology is actually diminishing, particularly in lower income districts. Also, these policies place much higher demands on teachers, many of whom are already working in difficult situations. The author claims that the challenge for those responsible for implementation of NCLB, is "to seek ways to

foster a caring climate while emphasizing the need for justice and equality and at the same time assuring that schools are maximizing resources” (Torres, 2004, p. 253).

A pre-NCLB study was done by Finnegan and Gross (2007) that examined the influence of accountability policies on teacher motivation in low performing elementary schools. The authors investigated the responses of teachers to school accountability policies and found that in schools that continually struggled, the policy actually weakened the initial motivational response of teachers. Teachers in the schools that remained on probation reported a much lower morale, questioned if they should remain in that school or stay in the teaching field (Finnegan & Gross, 2007). The authors called for a tailored support system of interventions for these schools that struggle in order to minimize the effect on teacher morale.

Bureaucratic structures are nothing new to American schools; most schools can be characterized by a hierarchy of authority, rules, regulations, standards, and a division of labor. While many criticize bureaucratic frameworks as fostering alienation, conformity, unresponsiveness, and relentlessness (Scott, 1998, as cited by Sweetland, 2001), other research suggests that bureaucracies actually improve worker satisfaction and reduce role conflict (Michaels et al., 1988; Senatra, 1980, as cited by Sweetland, 2001). Some researchers have found that accountability reform implementation has resulted in student achievement gains in schools as well. A study done by Carnoy and Loeb (2002), found that states that implemented increased accountability measures

over a 4 year period from 1996 - 2000, also showed significant performance gains on the eighth grade National Association of Education Progress Mathematics test. These performance increases were magnified even more for Black and Hispanic students. The dilemma presented here between hierarchically imposed accountability measures while also fostering collaborative teacher communities calls for some form of reconciliation. The importance of a strong principal leadership in bridging the gap between these two opposing ideologies becomes apparent.

Weathers (2006) argued for these two dichotomous movements to be combined by envisioning a form of "professional accountability that can be achieved in teacher communities whose goals are influenced by the standards and accountability mechanisms of school principals and state bureaucracies" (p. 21). In order for a group to feel collectively accountable, they need to feel empowered and be driven by a shared mission while still understanding the bureaucratic-type mechanisms in place. Here, leadership plays an important role in bringing all of the pieces together. Research by Green and Etheridge (2001) which studied 8 school districts across the United States that were undergoing significant school-wide reform, found that the establishment of a common vision, consistent dialogue, and a common clear understanding of the leadership and decision making processes led to the emergence of teacher support for accountability measures and establishment of standards.

Adler and Borys (1996) named two contrasting types of bureaucratic structures, coercive and enabling. The authors argued for the important positive

(enabling) function of bureaucracies which encouraged two-way communication, greater role clarity, and an overlap of organizational and employee goals because of greater job satisfaction and commitment that resulted. A compromise between the competing viewpoints of hierarchal control and teacher commitment was presented by Hoy and Sweetland (2001), who further defined enabling bureaucracies as structures that enhanced job satisfaction of its members, increased clarification and innovation, and lessened feelings of alienation within a school setting. Among the key features of an enabling bureaucracy include clarity and unity of purpose, clear norms and rules that everyone helps to enforce, and members have a voice and are involved (Lawson, n.d.).

Organizations can be described through their formalization (the written rules, regulations, policies and procedures) and centralization (hierarchy and locus of control for decision making) as its key features (Hoy, 2003). Schools are often criticized as being too loosely coupled, meaning the structure exhibits looseness of articulation among individuals (Pang, 1998), which can lead to varied outcomes and lack of common vision. Reform efforts such as testing, accountability, and implementation of higher standards have aimed at improving student achievement through tightening centralized control (Fusarelli, 2002) and enforcing more stringent formalization of rules and policies. Opponents to these efforts fear that applying more tightly coupled policies results in unworkable systems in schools with too strong top-down management. Fusarelli (2002) argued that successful systematic reform needs to combine both top-down and bottom-up approaches to be truly effective.

In an enabling structure, formalization is more flexible and is designed to help participants find solutions, where open communication is encouraged. In enabling organizations, centralization is also flexible, cooperative, and collaborative where teachers and principals work across recognized authority boundaries while still maintaining their own roles (Sweetland, 2001). The key is for principal leaders to recognize this delicate balance and understand their roles as enabling leaders within these hierarchical structures. Hoy (2003) summarized the need for this delicate balance claiming that “the accountability movement itself demands more not less hierarchy” and that the key however, is to “avoid the dysfunctions of centralization by changing the kind of hierarchy rather than eliminating it” (p. 90).

In enabling schools, trust and commitment are continually developed, while teachers and administrators are mindful and evaluative of the processes in place. A “mindful” leader is one who displays flexibility, recognizes that there are no absolute rules and understands that change is constant based on the needs of the organization at any given time (Hoy, 2003). The importance of trust is a recurring theme in the literature pertaining to positive organizational culture (Bolman & Deal, 2008) as well as in theories regarding effective change models (Covey, 1991).

In schools that were identified as having enabling school structures, rules “made sense” and were enforceable, and principals communicated openly, had informal styles, were approachable and displayed flexibility (Sinden, Hoy & Sweetland, 2004). Since trust in these enabling schools had been continually

developed along the way, enabling principals enjoyed the support from teachers even during times when teachers doubted new projects that were proposed, or when unpopular mandated changes were imposed from above. The trust that had been developed along the way within the enabling structure allowed for a more supportive staff when more “unpopular” initiatives surfaced.

Teacher Empowerment through Control and Influence within the School Structure

Hoy's (2003) claim that the accountability movement calls for a changed view of centralization in an organization uncovers the importance of teacher empowerment and decision making within the context of the No Child Left Behind legislation. To address the debate over centralization versus decentralization in schools, Ingersoll (1996) used the Schools and Staffing Survey data from 1987-1988 to determine the effect of school-wide and classroom decision-making power exercised by teachers on the amount of cooperation or conflict in schools. Ingersoll (1996) found the teachers' influence and power over decisions concerned with socialization of students (setting the discipline policy, disciplining students etc.) had the strongest negative correlation to conflict among faculty. The teachers who collectively felt more empowered to influence socialization activities as they pertained to students felt more solidarity and consensus among fellow staff members.

NCLB mandates and pressures have resulted in a variety of responses from school districts and administrators. In an effort to improve school quality,

principals often adopt prescriptive top-down quality improvement approaches for their teachers to implement. Cognizant of the fact that pure top-down approaches do not always work, one district's response to NCLB pressures was to implement a systematic, open, inclusive design where consensus, collaboration, and a structured quality planning schedule was put into place (Westfall, Peltier & Sheehan, 2005). This school district used an empowerment based vision sharing approach called an enhanced logic model which is often used in other service disciplines. In this school district, the model incorporated inputs, methods, outputs, outcomes, indicators, and incentives in order to identify an explicit set of classroom practices for increasing student achievement. By empowering teachers and group members using a systematic framework, staff and parents responded positively to the initiative, with a solid 50% teacher volunteer participation rate in these improvement teams (Westfall, Peltier & Sheehan, 2005).

Assessment of the degree of control teachers have within their buildings depends on the types of decisions being made. Ingersoll (1994) asserts that many studies that have focused on empowerment have used an oversimplified measure by either focusing on classroom decision making or school-wide decision making, which has resulted in very different viewpoints. Ingersoll (1994) found the schools tended to be more centralized around decisions revolving around the school-wide, social dimension of schools (setting policies for grouping students in classes by ability, determining school discipline policy, establishing school curriculum); teachers reported having little influence in these areas. On

the other hand, when the focus was on classroom level decision making (selecting texts, materials, classroom content, topics, teaching techniques and disciplining students in classrooms), schools looked much more decentralized with teachers reporting a great deal of control. Private school teachers reported more general control over decision making than their public school counterparts, as did smaller public schools when compared to larger public schools, but similar differences occurred between the two dimensions of decision making (classroom and school-wide) regardless of school size and school sector groups (Ingersoll, 1994).

Research has found that teacher empowerment also had a positive effect on teachers' level of commitment to the school (Dee, Henkin & Duemer, 2003). Teacher commitment is extremely important, particular in urban school districts that are striving to retain good teachers and reduce teacher burnout. A study done of elementary school teachers and principals in Washington found that principals' empowering behaviors that focused on empowerment (nurturing an ethic of shared responsibility and acknowledging teachers' power to make individual choices in their own work), had a significant positive relationship with teacher motivation (Davis & Wilson, 2000). Principals' empowering behaviors had the most effect on two specific areas of teacher motivation: teachers' perception of the increased choices they had to complete their work and the impact they felt they were making through their efforts. Moye, Henken and Egley (2005) investigated the relationships between teacher empowerment and the level of trust teachers had in the principal. In this study of urban elementary

school teachers, the measure of empowerment was broken down into four different levels: feelings of meaning (finding purpose in the work), competence (feelings of self-efficacy), self-determination (a sense of having a choice in actions), and impact (the degree of influence one has on operating outcomes at work). The authors found that each individually was a significant predictor of interpersonal trust and taken as a whole accounted for 52% of the variance in interpersonal trust. A faculty's trust in the principal is an important component in promoting effective work environments. A lack of trust in the principal leads to employees engaging in self-protective actions which in turn could have a detrimental effect on teacher communities (Moye, Henken & Egley, 2005).

In a study done by Blase and Blase (1997), principals' strategies and personal characteristics were explored to see the relationship each had on teachers' sense of empowerment. In this study empowerment was divided into three categories: affective (feelings such as satisfaction, motivation and confidence), school-wide (teacher's positive orientation to involvement in school-wide decisions and structures), and the classroom dimension (cognitive and behavioral changes in teacher's practice). The trust a principal has in his/her teachers emerged as the most significant characteristic of facilitative school leadership. Other strategies used by the principal that contributed significantly to teachers' sense of empowerment included developing a shared governance structure, encouraging individual teacher autonomy, providing support, listening, and giving rewards in the form of verbal praise and notes of appreciation (Blase & Blase, 1997).

Simply providing the structure and processes for shared decision making may not be enough to effectively implement meaningful change in a school and improved student achievement. Again, the importance of having shared vision and a shared mission is a recurring theme in the literature on teacher empowerment and decision making. Stevenson (2001) conducted a study of a secondary school with specific structures and processes in place for shared decision making and collective leadership. He found that the school advisory council that was created to resolve issues relating to the philosophy and operations of the school only dealt with administrative and managerial matters. Opportunity for double loop learning concerning the values surrounding teaching and learning as set forth by Argyris (1998) did not occur because the school did not have overarching common goals or principles to guide discussions and questions in these pedagogical areas.

Similarly, Prawat (1991) distinguished between two types of empowerment. He defined political empowerment as the process of addressing issues of unequal power relations. Conversely, the purpose of epistemological empowerment is to test the validity of knowledge claims. In the aforementioned school empowerment structure, teachers were only politically empowered, so true collective organizational learning could not occur since the issues that were addressed by the council were predominantly management-type issues. Here, simply democratizing the decision making process did not necessarily lead to improvement in teaching and learning. The group needed to have clear goals and a shared vision of what constituted effective teaching that could be used to

guide discussions (Stevenson, 2001). The lack of a common vision inhibited the group's ability to influence decisions centered on important instructional issues.

The Role of Principal Leadership

The importance of the principal's leadership role in synergizing the various components of teacher community described thus far can not be overlooked. The principal's responsibility within a school building is to coordinate these areas in order to achieve maximum, effective outcomes. Starratt (2005) declares that one of the responsibilities of educational leaders is to "transform the school from an organization of rules, regulations, and roles into an intentional self-governing community" where "initiative and interactive spontaneity infuse bureaucratic procedures with human and professional values" (p. 130).

Building a community with shared goals and values and where the school is unified and cooperates should be a primary goal of any ethical principal (Calabrese, 1989). Many researchers have examined specific principal leadership behaviors and their affect on an organization with the goal of identifying specific traits and styles that result in the most positive outcomes for staff and students; some of these leadership behaviors have been touched upon above. While teachers' trust in their colleagues plays a significant role in their commitment to teaching, school goals and overall job satisfaction, this relationship is mediated and supported by principal behaviors that build confidence and efficacy among teachers (Ebmeier, 2003). The quality of a principal's leadership is a critical factor in determining whether a school moves

forward. According to Sebring and Brynk (2000) the key elements of effective school supervision are an inclusive, facilitative orientation, institutional focus on student learning, efficient management, support, motivation, and a commitment in creating a viable professional community within schools. "Providing the formal structures is only the skeleton of an effective school"; schools that are improving are characterized by cooperative work relations among staff (Sebring & Brynk, 2000, p. 442).

Much has been written on the emergence of transformational leadership as a framework for promoting stronger, more committed organizations. Transformational leadership is characterized by leaders who are dedicated to "fostering the growth of organizational members and enhancing their commitment by elevating their goals" (Ross & Gray, 2006, p. 180). In their study, Ross and Gray (2006) looked at the relationships between transformational leadership behaviors, collective teacher efficacy and measures of teacher commitment (which included commitment to school mission, commitment to school as professional community and commitment to school-wide partnerships). The authors tested two models and found that transformational leadership had both direct and indirect effects on teacher commitment to school mission and commitment to professional learning community; collective efficacy was only a partial mediator of the effects of transformational leadership on teacher commitment.

When compared to transformational leaders, who appeal to the higher order needs of collaboration and achievement of shared goals, transactional

leaders rely on extrinsic rewards to motivate their staff (Ingram, 1997). Since teacher motivation is particularly important when teachers are faced with challenging situations where they are serving students who require a great deal of support, Ingram (1997) compared the level of transformational versus transactional leadership in public K-12 schools that dealt with moderately to severely disabled students in inclusion settings. The study found that overall, principals in these inclusive educational settings exhibited more transformational behaviors than transactional behaviors and that principals who exhibited higher transformational styles had teachers who reported higher levels of motivation. Since transformational leadership styles were related to higher teacher motivation in the study, Ingram (1997) argues that articulation of vision and creating cultures that value sharing and exchange of ideas among staff are extremely important goals for leaders in order to foster the commitment necessary for teachers to excel in these challenging situations.

Leithwood, Harris, and Hopkins (2008) compiled an overview of literature regarding successful school leadership and summarized findings into seven core claims about effective leadership within a school. One interesting finding was that almost all successful leaders drew upon the same collection of basic leadership practices. Among these practices included the task of building a vision and setting directions, along with understanding and developing people. Another important finding was that school leaders improved teaching and learning indirectly through their influence on staff motivation, commitment and working conditions. These authors found that very little research existed pertaining to

school leaders' influence on building staff capacity in curriculum by being viewed as instructional leaders and experts. On the other hand, an abundance of past studies have shown the powerful influence leaders have on staff members' commitment and beliefs about their practice. Specific descriptions of leadership style and personality have emerged as common indicators of leadership effectiveness. Leithwood, Harris, and Hopkins (2008) found that a relatively small number of principals' personal traits (as perceived by teachers) explained a high proportion of the variation in leadership effectiveness. The traits that teachers mentioned most when describing their principal's effective leadership behaviors were the amount of flexibility the principal exhibited, their open-mindedness, and the principal's readiness to learn from others.

Teachers' perception of their leader as being flexible has mixed reviews. A study done by Kelley, Thornton, and Daugherty (2005), which investigated the relationship between specific dimensions of principal leadership and measures of school climate in elementary schools, found that teachers' perception of a principal's flexibility was actually negatively correlated with measures of school climate. In contrast, communication, decision making, innovation, advocacy, evaluation, and staff development were dimensions of effective leadership that had significant positive correlations with school climate measurement. The authors argue that the areas in which a principal displays flexibility are important; teachers might frown upon principals who are flexible dealing with student discipline issues, yet flexibility with procedures and policy in order to enable

teachers to perform their jobs more effectively might have more positive reactions from staff (Kelley, Thornton & Daugherty, 2005).

Using Leithwood's framework, Crum and Sherman (2008) discovered six themes of successful leadership in their exploratory study of 12 school principals. The themes included: developing personnel and facilitating leadership, responsible delegation and team empowerment, recognizing ultimate accountability, communicating and rapport, facilitating instruction, and managing change. Since this was one of the few post-NCLB studies on effective school leadership, the authors posit that "further research on principal leadership is needed within the United States to reflect the radical changes that have taken place since NCLB" (Crum & Sherman, 2008, p. 566). Since most of the effective leadership literature thus far was from pre-NCLB studies, the authors in this study uncovered core practices of successful principals in a post-NCLB era.

Ongoing dialogue and communication within an organization and between leaders and their subordinates are important components of collaborative structures. Principals who are effective communicators, make suggestions in non-threatening ways, and continually give feedback and praise are attributed to influencing critical reflection, increased motivation, and higher efficacy among teachers (Blase & Blase, 2000). These same principals recognized that collaborative networks were essential to teaching and that "collaborative practices establish the idea that teachers are the knowledge source" and that "peer interaction has more impact than outside assistance" (Blase & Blase, 2000, para. 33). Principals in these schools that were characterized as effective

worked diligently to cultivate a non-threatening culture where individual and shared critical reflection were the norm and true collaborative knowledge sharing occurred. As seen here, principals' leadership behaviors within an organization were critical in fostering and promoting effective teacher communities.

Leaders who design facilitating structures enjoy the benefits of more meaningful teacher communities within their buildings. By doing an in-depth 3 year study of an elementary school that was identified as having a strong teacher community, Halverson (2003) described how artifacts in schools (the structures and systems in place that are designed to facilitate the practices in an organization) influence and are influenced by leaders. In this study, the three artifacts that were found to be the most successful were monthly breakfast club meetings, 5-week student assessment benchmarks, and the collaboratively developed school improvement plan. The authors claim that effective leaders who want to promote professional learning communities shape the system using existing artifacts, or by creating new ones. These artifacts act to enrich the human capital among teachers, develop a sense of shared vision and create an open trusting environment. According to Halverson (2003), "in order to promote professional communities in schools, leaders must create legitimate structures that give rise to the occasions in which teachers can share and reflect upon their hard-won instructional expertise, question their own practices and accept the suggestions of peers" (p. 22). The author goes on to stress the importance of closure in the feedback loops and the systems in place, to ensure that all stakeholders are given the opportunity to have a voice, receive pertinent

information, and increase their social capital within the organization. Effective leaders use or modify existing artifacts to close the system and encourage maximum learning and growth across their staffs. Halverson (2003) states that “as a result of many mandates and efforts to change instruction in an open system, teachers and leaders can become disenchanted with received reform artifacts and quietly learn to insulate their practices from external intervention” (p. 22). A principal’s challenge is to use and influence the available bureaucratic and cultural linkages (mechanisms that coordinate people’s activities within an organization) to create opportunities for teachers to engage in discussion about the school’s mission and internalize this vision into their daily teaching (Wilson & Firestone, 1987).

When a principal communicates with staff, he/she needs to keep the school’s goals at the core of the conversation, and be able to articulate the vision of the established instructional goals. Quinn (2002) studied teachers’ perceptions of four areas of school leadership (principal as resource provider, principal as instructional resource, principal as communicator, and principal’s visible presence) and their affect on teacher’s chosen instructional practices, measured by student and teacher engagement data in a sample of elementary, middle, and high schools. Principals who were highly rated as promoting communication and modeling commitment to school goals and vision were positively correlated with schools where teachers displayed high levels of active teaching and where students enjoyed active learning.

Alternatively, Leech and Fulton (2008) found that there was very little relationship between specific leadership behaviors (as measured by the Leadership Practices Inventory) and teachers' perceptions regarding their involvement in shared decision making. The sample used for their study included staff from 26 secondary schools in a large public school system. The specific leadership behaviors of the principal that were studied were (a) challenging the process, (b) inspiring a shared vision, (c) enabling others to act, (d) modeling the way, and (e) encouraging the heart. Surprisingly, all correlations between these behaviors and teachers' perceptions of shared decision making were weak; leadership practices only explained between one percent and four percent of the variance in the level of shared decision making among teachers. The authors explain that the weak relationships in this study could relate to the way that the construct of leadership behaviors was measured, and the fact that the leadership dimension did not include levels of trust nor did it include the relationship the principal had with the teachers in the study (Leech & Fulton, 2008).

The literature outlined here provided a summary of previous research done on teacher communities, the effects of accountability measures and bureaucratic systems within schools, teacher empowerment in decision making, and finally, effective principal leadership behaviors. In synthesizing the literature a few important themes emerge. From previous research we see that teacher empowerment, school policies and structures and principal leadership all may have an influence on the development of teacher communities. But what also

seemed to emerge from the research is the importance of principal leadership in ensuring that these processes that are put in place result in effective teacher communities. A recurring nuance in the literature is that simply having facilitating structures in place to promote collegiality is not necessarily enough. The role of the principal in guiding the actions and fostering a common vision cannot be underestimated.

Since teacher communities have been shown to be important components of a cohesive school culture, this study will connect to these themes in previous literature by analyzing the contributory factors that increase teachers' sense of community and will uncover how principal leadership may have a direct and indirect effect on these communities. The study will then look at the relationship between teachers' sense of community and their satisfaction with teaching as well as how they perceive state and district standards. Since NCLB is an obvious example of an "imposed" system of standards and accountability, the role that teacher communities play on how these standards are perceived is an important addition to the research on teacher communities.

As mentioned earlier, the data used for this study is from the 2003-2004 Schools and Staffing Survey (administered after NCLB mandates were put into place). Weathers (2006) conducted a similar study using SASS data that was gathered before NCLB legislation was implemented. Since debate continues around the effects that NCLB has had on schools, teachers and students across the United States, findings regarding potential predictors of teachers' sense of community will be of particular interest, along with how communities are

influenced both directly and indirectly by the principal. Given the mixed viewpoints concerning the effects of current accountability and hierarchical controls on teacher communities and the impact these measures may have on the culture of an organization, outcomes of this study would serve to clarify the role of facilitating/collaborative school structures, teacher empowerment through decision making and principal leadership behaviors on teacher communities.

Chapter III

METHODOLOGY AND PROCEDURE

Research Design

The study presented here employed a descriptive, quantitative, cross-sectional research design with the goal of providing more insight into the nature and relationships between the variables of interest. This study used secondary analysis of restricted-use data from the 2003-2004 Schools and Staffing Survey (NCES, 2003 – 2004) conducted by the United States Department of Education's National Center for Educational Statistics (NCES). NCES is the main federal entity for collecting and analyzing data related to education in the United States. Since the mid-1980's the Schools and Staffing Survey (SASS) has been periodically administered to collect national data on a variety of topics in education including principals' and teachers' perceptions of school climate and problems in their schools, teacher compensation, demographics, turnover, district hiring practices and basic characteristics of the student population and structures in place. Questions from the SASS questionnaires explore many constructs of interest to researchers and policymakers. The SASS has four main components: the School Questionnaire, the Teacher Questionnaire, the Principal Questionnaire, and the School District Questionnaire.

Sample

The survey sample for the national administration of the SASS included participants from public, private, charter, and Bureau of Indian Affairs-sponsored

schools across the United States. Schools were randomly selected within each state, and from these schools, the principal was included along with a random sampling of teachers from each school. The number of teachers randomly selected from each school depended on the size of the school. The strength in using the SASS is that it provides a large sample of teachers and principals from across the United States. The total sample size (K-12, all sectors) for the 2003-2004 SASS was 52,478 teachers and 3,622 principals from across all sectors.

For the purposes of this study, only full-time, regular, public, urban, elementary school teachers that responded to the SASS in 2003-2004 were included since the research questions for this study were focused on conditions in public, urban, elementary schools. The sample size for this study was 2859 urban, public, full-time, elementary school teachers which represented approximately 5% of the total teacher respondents to the 2003-2004 Schools and Staffing Survey.

Instrumentation

The 2003-2004 Schools and Staffing Survey (SASS) was used to address the five research questions posed in this study. Specific questions from the Public School Teacher Questionnaire were used to measure the independent variables and the primary outcomes for the five research questions. Information pertaining to the school and the teacher respondents were used as control variables in the analysis. The control, independent, and outcome variables

which were included in this analysis along with specific questions from the SASS that were used to measure each variable are outlined in the sections that follow.

Control Variables

A number of non-policy amenable variables were considered in the analysis as controls and to see how each affects the outcome variables. These non-policy amenable variables included socioeconomic status of students (measured by the percentage of students receiving free or reduced lunch), percentage of minority students in the school, teachers' gender, teachers' years of service in present school, and size of school. In order to analyze the five research questions, these non-policy amenable variables were used as controls in order to determine the predictive strength of the independent variables in each of the research questions.

Independent Variables

Several independent variables were used in this research to see the predictive power each had on the outcome variable. A group of questions from the Schools and Staffing Survey were used to measure each independent variable. The responses for each group of questions were summed to create one composite measurement for each of the independent variables. The three primary independent variables used for this research include, *principal leadership activities*, *teacher empowerment* and *facilitating/collaborative school structures*.

The following are the specific questions from the Schools and Staffing Survey that were used to measure each of these independent variables.

Questions that measure “Principal Leadership Behaviors”

The principal leadership behavior variable was measured by summing teacher responses to five questions from the SASS teacher questionnaire, which used a four point likert-type scale (1 = strongly agree, 2 = somewhat agree, 3 = somewhat disagree, 4 = strongly disagree):

- The principal lets staff members know what is expected of them.
(SASS Teacher Survey question #63a)
- The school administration’s behavior toward the staff is supportive and encouraging. (SASS Teacher Survey question #63b)
- My principal enforces school rules for student conduct and backs me up when I need it. (SASS Teacher Survey question #63h)
- The principal knows what kind of school he/she wants and has communicated it to the staff. (SASS Teacher Survey question #63k)
- In this school, staff members are recognized for a job well done.
(SASS Teacher Survey question #63m)

For the purposes of this study the scale scores were reverse coded to show that a score of one represented a low measure for this construct and a score of four represented a high level for this construct.

Questions that measure “Facilitating/Collaborative School Policies and Structures”

The facilitating/collaborative structures variable was measured by using one specific question from the SASS teacher questionnaire, which used either a yes or no response for each. For the purposes of this study, a response of “yes” was given a score of one, a response of “no” was given a score of zero:

- In the past 12 months did you participate in regularly scheduled collaboration with other teachers on issues of instruction? (yes or no, SASS Teacher Survey question #47b)

Questions that measure “Teacher Empowerment”

The teacher empowerment through decision making variable was measured by summing teacher responses to 13 questions from the SASS teacher questionnaire in classroom and school policy decision making. To measure empowerment through decision making the following questions from SASS were used: (1 = no control/influence, 2 = minor control/influence, 3 = moderate control/influence, 4 = a great deal of control/influence).

Teacher Control and Influence over classroom in:

- Selecting textbooks and other instructional materials,
- Selecting content, topics and skills to be taught,
- Selecting teaching techniques,
- Evaluating and grading students,

- Disciplining students, and
- Determining the amount of homework to be assigned.

(SASS Teacher Survey questions #62 a-f)

Teacher Control and Influence over school policy in:

- Setting performance standards for students,
- Establishing curriculum,
- Determining the content of in-service professional development programs,
- Evaluating teachers,
- Hiring new full-time teachers,
- Setting discipline policy, and
- Deciding how the school budget will be spent.

(SASS Teacher Survey questions #61 a-g)

Outcome Variables

The primary outcome variables in the research questions posed were *teachers' sense of community*, and *satisfaction with teaching*. The satisfaction with teaching outcome variable included both general feelings of job satisfaction along with how teachers see the influence of state and district standards on their satisfaction with teaching. The following are the specific questions from the Schools and Staffing Survey that were used to measure each of these outcome variables.

Questions that measure “Teacher Sense of Community”

The teacher sense of community variable was calculated by summing teacher responses to three questions from the SASS teacher questionnaire, which used a four point likert-type scale (1 = strongly agree, 2 = somewhat agree, 3 = somewhat disagree, 4 = strongly disagree):

- Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes. (SASS Teacher Survey question #63i)
- Most of my colleagues share my beliefs and values about what the central mission of the school should be. (SASS Teacher Survey question #63j)
- There is a great deal of cooperative effort among the staff members. (SASS Teacher Survey question #63l)

For the purposes of this study the scale scores were reverse coded to show that a score of one represented a low measure for this construct and a score of four represented a high level for this construct

Questions that measure “Satisfaction with Teaching”

The satisfaction with teaching variable was measured by summing teacher responses to five questions from the SASS teacher questionnaire, which used a four point likert-type scale (1 = strongly agree, 2 = somewhat agree, 3 = somewhat disagree, 4 = strongly disagree):

- The stress and disappointments involved in teaching at this school aren't really worth it. (SASS Teacher Survey question #66a)
- If I could get a higher paying job I'd leave teaching as soon as possible. (SASS Teacher Survey question #66d)
- I think about transferring to another school. (SASS Teacher Survey question #66e)
- I don't seem to have as much enthusiasm now as I did when I began teaching. (SASS Teacher Survey question #66f)
- I think about staying home from school because I'm just too tired to go. (SASS Teacher Survey question #66g)

Questions that measure "Impact of State and District Standards"

The impact of state and district standards variable was measured by the responses to the following question from the SASS teacher questionnaire, which used a four point likert-type scale (1 = strongly agree, 2 = somewhat agree, 3 = somewhat disagree, 4 = strongly disagree):

- State or district content standards have had a positive influence on my satisfaction with teaching. (SASS Teacher Survey question #63o)

For the purposes of this study the scale scores were reverse coded to show that one represented a low measure for this construct and a four represented a high level for this construct.

A summary of the main independent and outcome variables used throughout the study is presented in Table 1. This table also provides an overall description of each variable for easier reference.

Table 1.

Summary of Independent and Outcome Variables Used in Analysis

<i>Independent Variables</i>	<i>Description</i>
Principal Leadership Activities/Behaviors	Scale of teacher's perception of the existence of support from the principal through feedback, encouragement, consistency and communication (Five questions from SASS where 1 = low, 4 = high)
Facilitating/Collaborative School Structures	Teacher was able to participate in regularly scheduled collaboration (dichotomous variable, 0 = no, 1 = yes)
Teacher Empowerment through Decision Making	Scale of teacher's perception of control and influence over classroom and school policy and decision making (13 questions from SASS where 1 = no influence at all, 4 = a great deal of influence)
<i>Outcome Variables</i>	<i>Description</i>
Teachers Sense of Community	Scale of teachers' perception of common beliefs, values, and cooperative effort among his/her colleagues (Three questions from SASS where 1 = low, 4 = high)
Teacher Satisfaction with Teaching	Scale of teacher's overall job satisfaction (Five questions from SASS where 1 = low, 4 = high)
Teacher Perception of the Impact of State and District Standards	Scale of teacher's perception of the positive influence content standards has on satisfaction with teaching (One question from SASS where 1 = low, 4 = high)

Mediation Analysis

In addition to studying direct relationships between the independent and the dependent variables in the research questions for research questions 2 and 3, a mediation analysis was included. Much of the literature review outlined in Chapter II suggested that simply putting systems in place for collaboration and participation in decision making does not guarantee that effective teacher communities will develop. The role of effective leadership within these contexts was explored as well. The following models were created to illustrate how principal leadership behaviors play both a direct and an indirect role on teachers' sense of community.

Mediation Analysis for Research Question 2:

What influence do facilitating/collaborative school policies and structures that promote teacher interaction have on teachers' sense of community?

Subsidiary analysis: How are these effects influenced by principal behaviors?

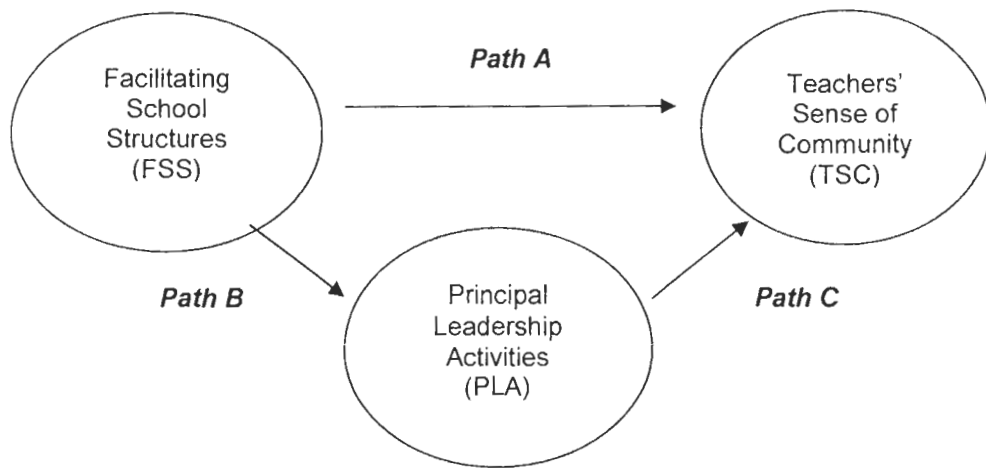


Figure 1. Mediating effect of principal leadership activities on the relationship between facilitating school structures and teachers' sense of community.

The mediation model is driven by the idea that by having facilitating/collaborative structures in place in which teachers regularly participate predicts teachers' sense of community directly (path A), but may influence principal leadership activities (such as increased communication, support and continual feedback) which would then influence teachers' sense of community indirectly (path B → path C).

Mediation Analysis for Research Question 3:

What relationship exists between teacher empowerment through the context of teachers' perception of their influence and control in decision making and their sense of community?

Subsidiary analysis: To what degree does teacher empowerment mediate principal leadership behaviors in predicting teachers' sense of community?

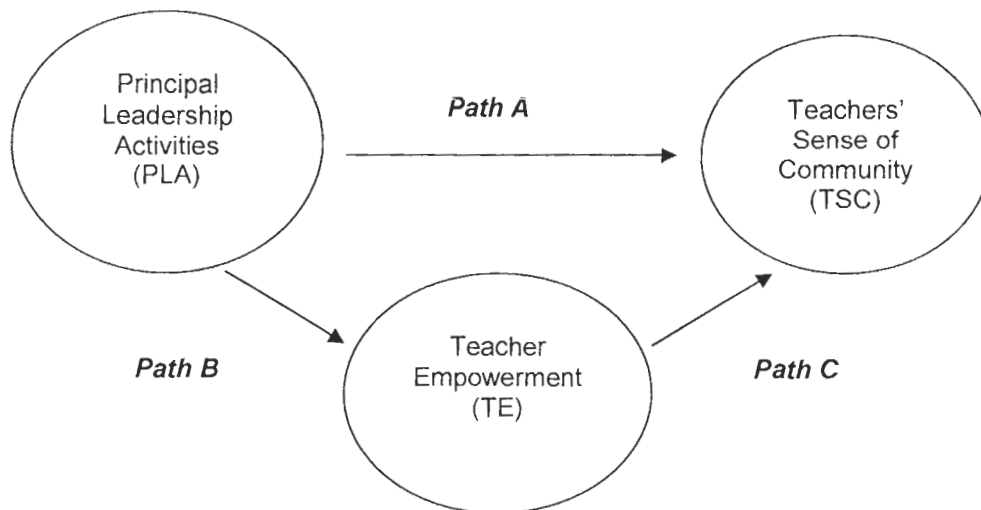


Figure 2. Mediating effect of teacher empowerment on relationship between principal leadership behaviors and teachers' sense of community.

The idea behind this mediation model is that principal leadership behaviors may have a direct effect on teachers' sense of community (path A), but these behaviors and activities also affect the amount of empowerment that teachers may feel which in turn affects the sense of community that they feel (path B → path C). The mediator variable (teacher empowerment) in the model above is deemed to be one whose effect on teachers' sense of community may itself be influenced by a prior variable (principal leadership activities).

Data Collection Techniques

For the research questions in this study, data collection was done by retrieval from the restricted use database on CD diskette which included all responses from the 2003 – 2004 Schools and Staffing Survey for urban, public, elementary school teachers and principals that was administered in 2003-2004. The researcher gained access to this restricted use database through the approval process outlined through NCES which included submission of all necessary affidavits. Data was also retrieved from the findings of the Weathers (2006) study, in order to discuss differences in results using pre-NCLB data and post-NCLB data from the Schools and Staffing Survey and to observe if there have been any fundamental shifts in teachers' sense of community. Relevant data from the 2003-2004 NCES disc containing responses from the 2003-2004 Schools and Staffing Survey was imported into the Statistical Package for the Social Sciences (SPSS) software program.

Data Analysis

From the 2003-2004 Schools and Staffing Survey, five research questions were explored that investigated the contributory factors to a teacher's sense of community in public urban elementary schools in the United States, and how a sense of community influenced job satisfaction and perception of standards among teachers. Both descriptive statistics and hierarchical regression analysis using SPSS software was used to study if significant relationships existed

between the independent and the dependent variables for each of the following research questions:

1. What influence do principal leadership activities have on teachers' sense of community?
2. What influence do facilitating/collaborative school policies and structures that promote teacher interaction have on teachers' sense of community?
3. What relationship exists between teacher empowerment through the context of teachers' perception of their influence and control in decision making and their sense of community?
4. How does teachers' sense of community within their building influence their satisfaction with teaching?
5. What is the influence of teacher communities on how teachers perceive the effects of state and district content standards?

For each research question, the non-policy amenable variables discussed above were used in the base model of the hierarchical linear regression to see the predictive value of each. The second model in the hierarchical regression then added an independent variable for each research question in order to determine its effects on the outcome variable when controlling for the non-policy amenable variables. In the third model of the hierarchical regression analysis for research questions two through five an additional variable was added in order to test the mediation models presented above with regard to teachers' sense of community as the outcome variable as well as to further clarify predictors of

satisfaction with teaching as an outcome variable. A summary of the findings for each hierarchical regression analysis are outlined and presented in table format in Chapter IV.

Chapter IV

ANALYSIS OF DATA

Understanding teacher communities and the contributing factors that foster them is an important goal for any educational leader. As mentioned in earlier chapters, the purpose of this study was to explore some of the contributory factors that lead to teacher communities, and how the existence of a sense of community affects a teacher's satisfaction with teaching and perception of the educational standards in place. The instrument used in the statistical analysis that follows was the 2003-2004 Schools and Staffing Survey (NCES, 2004 - 2004). Responses from specific questions from the Schools and Staffing Survey (SASS) that measure the constructs of principal leadership activities, teachers' sense of community, teacher empowerment, facilitating structures that allow collaboration time, teachers' perception of standards, and teachers' satisfaction with teaching were used for the purposes of this study.

In the first section of this chapter, exploratory data analysis was performed to present some of the descriptive statistics of interest associated with this sample of teachers. Within this section, tests for normality were done on the latent variables used in order to reveal possible errors and violations to the assumptions necessary for the statistical analysis employed. When and where extreme skewness occurred, variables were transformed using accepted transformation formulas to ensure normality. In the second section of this chapter, hierarchical multiple regression analysis was performed for each research question posed. Principal leadership activities were analyzed in

mediation models for research questions 2 and 3 to see how the inclusion of principal behavior affects the overall magnitude and direction of the relationships found between variables that foster teachers' sense of community.

Presentation of Descriptive Characteristics of Respondents

The sample used for this study included all of the respondents to the 2003-2004 Schools and Staffing Survey who were regular, full-time teachers that taught in urban, public, elementary schools in the United States during that year. Before doing any inferential statistics, exploratory data analysis was done to better understand the data. Table 2 outlines descriptive statistics for some of the characteristics of interest that will be used as controls in the hierarchical multiple regression analysis for this sample of teachers. This table describes those characteristics in the study that were generally not policy amenable. The variables depicted in Table 2 are the variables that were used as controls in the first level (Model 1) of each hierarchical multiple regression analysis.

Table 2.

Descriptive Statistics for Non-Policy Amenable Variables for the Sample of Urban Elementary Public School Teachers (N = 2859)

	N	Minimum	Maximum	Mean	Std. Deviation
Years teaching in this school	2859	0	38	7.66	7.208
Percent of students in present school eligible for free or reduced lunch	2859	0	100	58.25	29.784
Student enrollment in present school	2859	100	2168	542.23	276.573
Percent minority students in present school	2859	0	100	59.38	33.018

The gender variable was coded so that a 0 represented male and a 1 represented female. In this study, 85% of the sample of public urban elementary school teachers were female. The mean number of years experience teaching full-time in the sample's present school was 7.66 years. For the purposes of this study, the percentage of students who were eligible for free or reduced lunch was used to measure the socioeconomic level of the student populations in the schools served by the teachers who responded. From Table 2 we see that the mean percentage of students who were eligible for free or reduced lunch was 58.25% for these urban elementary schools. The size of the school from which these teachers came was measured by the total number of students enrolled. Schools with enrollment of over 100 were included in the sample. The range for enrollment was from 100 to 2168, and the mean for all of the schools was 542.23.

Latent Variables Created

Latent variables were created by grouping particular questions from the Schools and Staffing Survey that pertained to each construct of interest and summing the responses to those particular questions. The four latent variables formed for this study included: *teachers' sense of community*, *principal leadership activities*, *teacher empowerment*, and *satisfaction with teaching*. To assess whether the items that were summed to create each of the latent variables formed a reliable scale, Cronbach's alpha was computed. The alphas for teachers' sense of community, principal leadership activities, teacher

empowerment and satisfaction with teaching were .763, .863, .838 and .779 respectively, indicating good internal consistency. For each scale, the Cronbach's alpha was higher with all items included than if any had been deleted. Appendices A, B, C and D summarize the Cronbach's alpha analyses for these four latent variables.

Normality Analysis

In order to meet the assumptions of parametric statistics, the latent variables used in the hierarchical multiple regression analysis were tested for normality using the skewness index measurement generated in SPSS. Variables that had a skewness measure of between 1 and -1 were considered at least approximately normal. Table 3 outlines the skewness index measurements for each of the latent variables described above.

Table 3.

Skewness Measures for Latent Variables

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness
Teacher's sense of community (TSC)	2859	3	12	9.64	1.951	-.768
Teacher empowerment (TE)	2859	13	52	34.97	6.637	-.026
Satisfaction with teaching (SWT)	2859	5	20	15.34	3.159	-.532
Principal leadership activities (PLA)	2859	5	20	16.76	3.238	-1.164
Valid N	2859					

From Table 3, we can see that most of the variables have skewness values between -1 and 1, but the skewness statistic for principal leadership activities was quite skewed at -1.164. In order to use this variable with statistics that require a normally distributed variable, the principal leadership activities variable was transformed to correct its negative skewness. In order to correct the negative skewness the distribution was first reflected so that it was positively skewed, then a transformation was computed on the values of this positively skewed distribution. To do the reflection of the original distribution, 1 was added to the highest value for the original principal leadership activities variable (1 + 20) for a value of 21 and each of the original values for principal leadership activities was subtracted from 21. To then correct the skewness, the square root was

taken of this difference. The transformation formula used for the purposes of this analysis was the following:

$$\text{new principal leadership activities} = \text{SQRT}(21 - \text{principal leadership activities})$$

The transformed variable was then reflected back resulting in a negative skewness statistic of $-.496$ which was within the -1 to 1 range (see Table 4).

Table 4.

Transformation of Negatively Skewed Principal Leadership Activities

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness
NewPLA	2859	1.00	4.00	3.0861	.75638	-.496
Valid N	2859					

Exploration of Research Questions

Hierarchical multiple regression analysis was done for each of the five research questions presented in this study. For research questions two and three, the mediation models presented in chapter three were explored.

Analysis for Research Question 1:

What influence do principal leadership activities have on teachers' sense of community?

In analyzing this question, non-policy amenable items were considered in the first level to form a baseline by which to compare other influences throughout

the study. The non-policy amenable items for consideration included socioeconomic level of students within the teacher's school (measured by percentage of students eligible for free or reduced lunch), percent minority students in the teacher's school, size of teacher's school, the number years experience the teacher had in his/her present school and teacher's gender. Prior to running the hierarchical multiple regression, an initial analysis was done to check correlations between these non-policy amenable variables to test if there were multicollinearity problems. This correlation matrix is presented in Table 5.

Table 5.

Test of Collinearity of Non-Policy Amenable Variables

		Gender	percent eligible for free or reduced lunch	Percent minority students	Total students	Years teaching in this school
Gender	Correlation	1	-.041*	-.035	-.060**	.053**
	Sig. (2-tailed)		.028	.059	.001	.005
Percent eligible for free or reduced lunch	Correlation	-.041*	1	.694**	.065**	-.038*
	Sig. (2-tailed)	.028		.000	.000	.044
Percent minority students	Correlation	-.035	.694**	1	.175**	-.102**
	Sig. (2-tailed)	.059	.000		.000	.000
Total students enrolled	Correlation	-.060**	.065**	.175**	1	-.052**
	Sig. (2-tailed)	.00	.000	.000		.005
Years teaching in this school	Correlation	.053**	-.038*	-.102**	-.052**	1
	Sig. (2-tailed)	.005	.044	.000	.005	

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

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

N=2859

The correlation matrix indicated a large correlation (.694) between percent minority students and percent eligible for free and reduced lunch. The high correlation between these variables posed a problem when running the hierarchical multiple regression analysis. The high correlation between independent variables affected the significance of the beta coefficients since

there was too much overlap between these two predictors. To correct for multicollinearity, the percent minority students variable was eliminated, since the researcher was more interested in how the socioeconomic levels of the students served influenced teacher communities.

The dependent variable for research question 1 was teachers' sense of community. For Model 1 in the hierarchical multiple regression analysis for research question 1, only the following non-policy amenable independent variables were included: number of years teaching in present school, total students enrolled in teacher's present school, percent of students in teacher's present school who are eligible for free or reduced lunch and teacher gender. In Model 2, the principal leadership activities variable was added to the regression equation. Table 6 outlines the hierarchical multiple regression analysis results for this research question.

Table 6.

Hierarchical Regression Analysis of Predictors of Teachers' Sense of Community with Principal Leadership Activities as Independent Variable

Variable	Model 1			Model 2		
	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta
Gender	.328	.103	.059**	.170	.081	.031*
Total Students	-.001	.000	-.089**	-.001	.000	-.076**
Percent Eligible Free/Reduced Lunch	-.005	.001	-.079**	-.004	.001	-.054**
Years in current school	.015	.005	.054**	.019	.004	.070**
Principal Leadership Activities (PLA)				1.567	.038	.607**
	$R^2 = .024$ $R^2 \text{ change} = .024$			$R^2 = .391$ $R^2 \text{ change} = .367$		

Dependent Variable: Teachers' sense of community

** $p < 0.01$ * $p < 0.05$

In the first model, each of the non-policy amenable variables (gender, total student enrollment, percent eligible free/reduced lunch and years teacher has been at present school) had predictive value and influenced the outcome variable (teachers' sense of community). These variables taken together explained 2.4% of the variance in teachers' sense of community ($R^2 = .024$) and was significant, $F(4, 2854) = 17.325$, $p < .001$. Of these non-amenable variables, the total students enrolled was the strongest (negative) predictor of teachers' sense of community (beta = $-.089$), followed by the percentage of students that were eligible for free/reduced lunch (beta = $-.079$). This indicates that in larger schools

or in schools that service higher numbers of students with low socioeconomic levels, teachers tend to experience a lower sense of community among their colleagues. Females tend to report that they feel more of a sense of community than males, and as the number of years experience the teachers have at the present school increases, so does their sense of community (beta = .054).

When principal leadership activities was added in Model 2 it significantly improved the prediction, R^2 change = .367, $F(1, 2853) = 1718.799$, $p < .001$. This is a sizeable change in variance when principal leadership activities are added as a predictor of teachers' sense of community. In Model 2, all variables taken together accounted for 39.1% of the variance, but 36.7% of this variance is due to the addition of principal leadership activities as a predictor of teachers' sense of community. From this analysis we see that all non-policy amenable variables were significant in both models, but as Table 6 above suggests, when controlling for these non-amenable variables of gender, total student enrollment, percent eligible for free/reduced lunch and years teaching in present school, principal leadership activities contributes greatly in predicting teachers' sense of community with a beta value of .607. This beta weight for principal leadership activities was roughly eight times as strong as the next strongest variable in predicting teachers' sense of community in the model. The more teachers agreed that their principals displayed supportive and encouraging behaviors, communicated expectations and a vision for the school, backed teachers up when necessary and recognized staff for positive job performance on the composite scale, the more they felt a sense of community with other teachers in

their buildings. Although non-policy amenable variables were significant predictors, the power of principal leadership behaviors in predicting a teachers' sense of community was greater than the influence of all non-policy amenable variables taken together.

Analysis for Research Question 2:

What influence to facilitating/collaborative school policies and structures that promote teacher interaction have on teachers' sense of community?

In order to gain a better understanding of the nature and predictive relationship between facilitating/collaborative school structures and teachers' sense of community, principal leadership activities was included as a mediator. The collaborative school structures variable was measured by teacher responses to the question regarding their participation in regularly scheduled collaborative time with other teachers on the issue of instruction. The mediation model that was discussed in Chapter III was tested for the existence of partial mediation. The idea that drives this mediation model is that having facilitating/collaborative structures in place in which teachers regularly participate predicts teachers' sense of community directly (path A), but may influence principal leadership activities (such as increased communication, support and continual feedback) which would then influence teachers' sense of community indirectly (path B → path C).

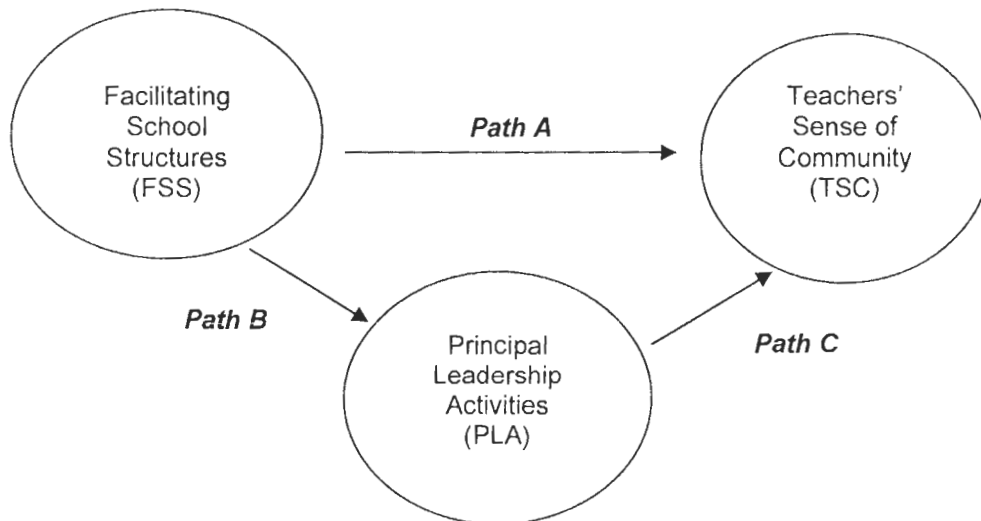


Figure 1. Mediating effect of principal leadership activities on the relationship between facilitating school structures and teachers' sense of community.

In order to test this mediation model, three conditions were established to see if mediation occurred: (a) The independent variable (FSS) predicted the dependent variable (TSC); (b) The independent variable (FSS) predicted the mediator (PLA); and (c) The mediator (PLA) predicted the dependent variable (TSC).

A regression analysis was performed to satisfy the requirement that facilitating school structures (FSS) significantly predicted principal leadership activities (PLA) in part (b). Facilitating school structures was found to be a significant predictor of principal leadership activities with a beta value of .078 ($p < .001$), which affirmed the idea the facilitating school structures may have both a direct effect on teachers' sense of community and an indirect effect by also

influencing principal leadership activities which result in even more of a sense of community among teachers.

Hierarchical regression analysis was used to allow the researcher to progressively add predictors to the regression and analyze the increased predictability resulting from each addition. Non-policy amenable items (controls) were considered as independent variables in the first Model, while the variable that measured regular participation in collaboration with other teachers was added as an independent variable in Model 2, and the mediating variable of principal leadership activities was added in Model 3. Table 7 outlines the hierarchical multiple regression analysis results for this research question.

Table 7.

Hierarchical Regression Analysis of Predictors of Teachers' Sense of Community with Facilitating/Collaborative School Structures as Independent Variable

Variable	Model 1			Model 2			Model 3		
	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta
Gender	.328	.103	.059**	.295	.102	.053**	.151	.081	.027
Total Students	-.001	.000	-.089**	-.001	.000	-.089**	-.001	.000	-.076**
Percent Eligible Free/Reduced Lunch	-.005	.001	-.079**	-.005	.001	-.073**	-.003	.001	-.051**
Years in current school	.015	.005	.054**	.013	.005	.047*	.018	.004	.066**
Facilitating/Collaborative School Structure (FSS)				.581	.088	.122**	.362	.070	.076**
Principal Leadership Activities (PLA)							1.552	.038	.602**
	R ² = .024 R ² change = .024			R ² = .038 R ² change = .015			R ² = .396 R ² change = .358		

Dependent Variable: Teachers' sense of community

**p < 0.01 *p < 0.05

From Table 7 we can see that by adding facilitating/collaborative structures as a predictor in the second model, it improved the prediction, $R^2 = .038$, $F(1,2853) = 43.720$, $p < .000$. The R^2 change indicated that by including facilitating/collaborative structures, 1.5% of the variance was added to the second model (R^2 change = .015). The significant beta value for facilitating/collaborative school structures in Model 2 (beta = .122) indicated that teachers who reported that they participated in regularly scheduled collaboration

time with other teachers on issues of instruction also reported a higher sense of community among colleagues. By including the mediator (principal leadership activities) in Model 3, 35.8% of the variance in teachers' sense of community was added by including this variable, and all variables together significantly predicted teachers' sense of community, $R^2 = .396$, $F(1, 2852) = 1691.487$, $p < .000$.

When principal leadership activities is added in Model 3, we see that gender is no longer a significant predictor (significance = .063) and the standardized beta coefficient for principal leadership (.602) is almost eight times as strong as facilitating/collaborative structures as a predictor of teachers' sense of community. Once again we see the relative strength of principal leadership activities as a predictor of the outcome variable, even when included with regularly scheduled collaborative time for teachers. The beta weights presented in Table 7 suggest that principal leadership activities contribute most in predicting teachers' sense of community and the behaviors of the principal mediate the effects of regularly scheduled collaboration time.

From the analysis for research question 2 the beta values for the paths between variables in the mediation model can be completed in Figure 3.

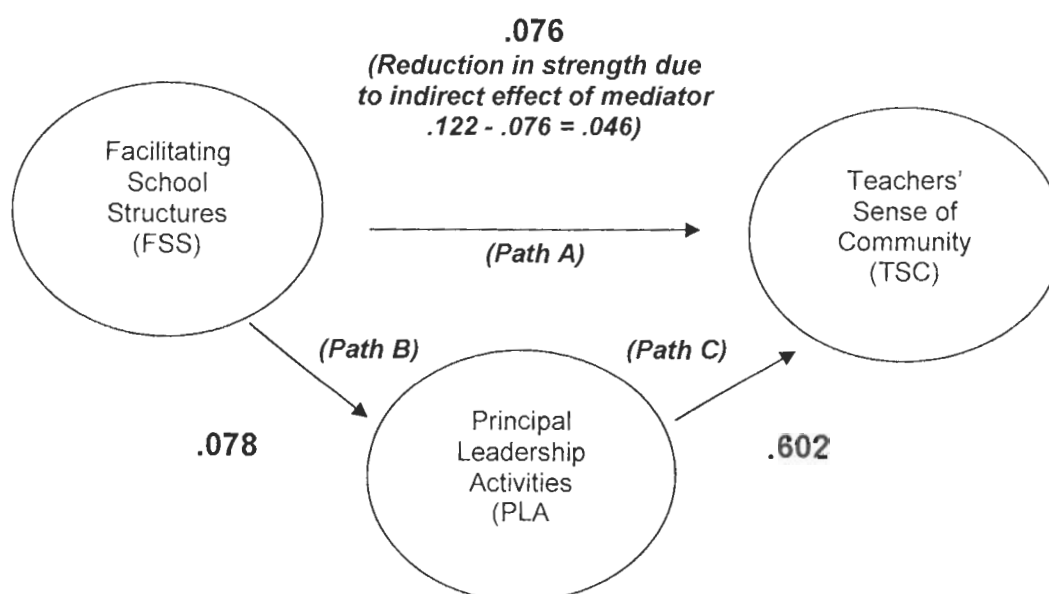


Figure 3. Mediating effect of principal leadership activities on the relationship between facilitating school structures and teachers' sense of community with path beta values included.

The effects of facilitating school structures on teachers' sense of community occurs both directly (path A) and indirectly through principal leadership activities (through path B then path C). The beta coefficient for the independent variable (facilitating school structures) decreased from .122 to .076 between Model 2 and Model 3 in the regression analysis with the addition of the mediator (principal leadership activities). This decrease in the standardized regression coefficient from .122 to .076 represents a 38% reduction in the predictive strength of facilitating school structures when principal leadership

activities is added as a mediator. The reduction in the beta coefficient indicates partial mediation.

Analysis for Research Question 3:

What relationship exists between teacher empowerment through the context of teachers' perception of their influence and control in decision making and their sense of community?

In order to gain a better understanding of the nature and predictive relationship between teacher empowerment and teachers' sense of community, the mediation model introduced in Chapter III (see Figure 2) was tested for mediation.

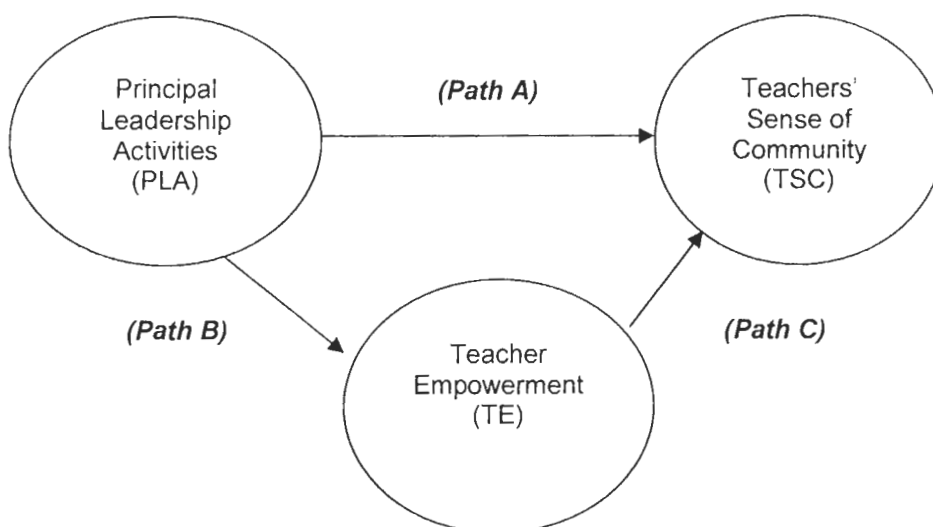


Figure 2. Mediating effect of teacher empowerment on relationship between principal leadership behaviors and teachers' sense of community.

For this model the conjecture was posited that principal leadership behavior affects the amount of empowerment that teachers feel which in turn affects the sense of community that they feel. The mediator variable (teacher empowerment) in the model above was deemed to be one whose effect on teachers' sense of community may be influenced by a prior variable (principal leadership activities). In order to test this mediation model, the same three conditions were established to see if mediation occurred: (a) The independent variable (PLA) predicted the dependent variable (TSC); (b) The independent variable (PLA) predicted the mediator (TE); and (c) The mediator (TE) predicted the dependent variable (TSC).

A regression analysis was performed to satisfy the requirement that principal leadership activities (PLA) significantly predicted teacher empowerment (TE) in part (b) above. The beta value of principal leadership activities in predicting teacher empowerment was .379 and was significant at $p < .001$. This positive beta indicated that as the measure for the principal behaviors and activities variable increased so did teachers' sense of empowerment in decision making. Hierarchical regression analysis was then used to further analyze this research question. In analyzing this question, non-policy amenable items were again considered as independent (control) variables in the first Model, principal leadership activities was added as the independent variable in Model 2 and the mediating variable of teacher empowerment through control and influence on decision making throughout the school was added as an additional variable in

Model 3. Table 8 outlines the hierarchical multiple regression analysis results for this research question.

Table 8.

Hierarchical Regression Analysis of Predictors of Teachers' Sense of Community with Principal Leadership Activities as Independent Variable and Teacher Empowerment as a Mediator

Variable	Model 1			Model 2			Model 3		
	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta
Gender	.328	.103	.059**	.170	.081	.031*	.195	.081	.035*
Total Students	-.001	.000	-.089**	-.001	.000	-.076**	.000	.000	-.069**
Percent Eligible Free/Reduced Lunch	-.005	.001	-.079**	-.004	.001	-.054**	-.003	.001	-.044**
Years in current school	.015	.005	.054**	.019	.004	.070**	.019	.004	.072**
Principal Leadership Activities (PLA)				1.567	.038	.607**	1.476	.041	.572**
Teacher Empowerment (TE)							.027	.005	.092**
	$R^2 = .024$ R^2 change = .024			$R^2 = .391$ R^2 change = .367			$R^2 = .398$ R^2 change = .007		

Dependent Variable: Teachers' sense of community

**p < 0.01 *p < 0.05

As Table 8 indicates, by adding principal leadership activities as a variable in Model 2, the predictability is increased greatly from the base model, $R^2 = .391$, $F(1,2853) = 1718.799$, $p < .000$. 36.7% of the variance in teachers' sense of

community is added to the first model by including principal leadership activities as a predictor in Model 2. The strong beta for principal leadership (.607) was positive and significant indicating that as teachers perceived a greater amount of support, communication, feedback and so forth from their principal they felt a stronger sense of community with fellow teachers. By adding teacher empowerment as a predictor in Model 3, the variance in teachers' sense of community is increased by a small amount (.7%). All of the predictors taken together explained 39.8% of the variance in teachers' sense of community and all were significant, $R^2 = .398$, $F(1, 2852) = 1317.321$.

While all the variables included in this analysis significantly predicted teachers' sense of community, principal leadership activities contributed most to the variance with a coefficient of .572 which was more than six times as strong as the beta weight for teacher empowerment (.092). By including teacher empowerment as a mediator in model 3 of the regression analysis, we see that the beta weight for principal leadership activities decreased by .035, indicating a partial mediation effect.

From the total analysis for research question 3 the beta values for the paths between variables in the mediation model can be completed.

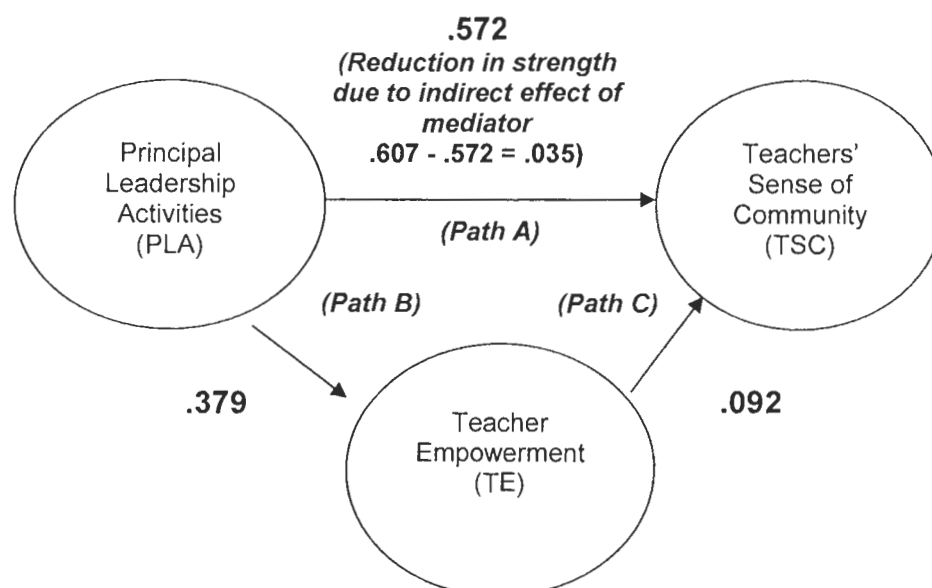


Figure 4. Mediating effect of teacher empowerment on relationship between principal leadership behaviors and teachers' sense of community with path beta values included.

The model and regression analysis (see Figure 4) showed partial mediation when teacher empowerment was included. The beta weight for principal leadership decreased by $.035$ when teacher empowerment was included as a mediating predictor variable. This decrease in the standardized regression coefficient from $.607$ to $.572$ represents a 6% reduction in the predictive strength of principal leadership behaviors when teacher empowerment is added as a mediator. This decrease indicates that teacher empowerment slightly mediates the relationship between principal leadership activities and teachers' sense of community. Through their behaviors and actions, principals directly (and strongly) influence the sense of community that teachers feel, but

there is relatively small indirect influence as well through the degree that principals foster teacher empowerment which leads to a greater sense of community among staff.

Analysis for Research Question 4:

How does teachers' sense of community within their building influence their satisfaction with teaching?

In research question 4, satisfaction with teaching was the dependent variable. In analyzing this question, non-policy amenable items were again considered as independent variables in the first model, the measurement of teachers' sense of community was added as an independent variable in Model 2, and principal leadership activities was added in Model 3. Table 9 outlines the hierarchical multiple regression analysis results for this research question.

Table 9.
Hierarchical Regression Analysis of Predictors of Satisfaction with Teaching

Variable	Model 1			Model 2			Model 3		
	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta
Gender	.097	.167	.011	-.080	.158	-.009	-.114	.151	-.013
Total Students	-.001	.000	-.052**	.000	.000	-.022	.000	.000	-.034*
Percent Eligible Free/Reduced Lunch	-.010	.002	-.095**	-.007	.002	-.068**	-.008	.002	-.072**
Years in current school	.009	.008	.020	.001	.008	.002	.010	.007	.024
Teacher Sense of Community (TSC)				.541	.029	.334**	.182	.035	.112**
Principal Leadership Activities (PLA)							1.495	.089	.358**
	$R^2 = .013$ R^2 change = .013			$R^2 = .122$ R^2 change = .109			$R^2 = .202$ R^2 change = .080		

Dependent Variable: Satisfaction with Teaching

**p < 0.01 *p < 0.05

Of the non-policy amenable variables that were included as controls in Model 1, only total students enrolled and percent eligible for free/reduced lunch were significant predictors and they explained 1.3% of the variance in satisfaction with teaching ($R^2 = .013$, $F(4,2854) = 9.587$, $p < .0001$). In comparing the R^2 for these non-policy amenable variables (.013) in this research question where satisfaction with teaching was the outcome variable compared to the R^2 in prior research questions (.024) where teachers' sense of community was the outcome variable, we see that these non-policy amenable variables had less of an effect on satisfaction with teaching than they did on teachers' sense of community. For

this research question both total student enrollment and percent of students eligible for free/reduced lunch were negative predictors (beta = -.052 and -.095) of the outcome variable; as the size of the school and percentage of low socioeconomic students went up, satisfaction with teaching went down. When teachers' sense of community is added as a predictor in Model 2, only this variable and percent eligible free/reduced lunch were significant predictors and they explained 12.2% of the variance in satisfaction with teaching ($R^2 = .122$, $F(1,2853) = 353.951$, $p < .001$) By adding teachers' sense of community as an independent variable, 10.9% of the variance is added to the first model. In Model 3, which adds principal leadership activities as a predictor, 20.2% of the variance in satisfaction with teaching can be explained by the combined contributions of the predictors. Percentage of students eligible for free/reduced lunch, number of students enrolled, teachers' sense of community and principal leadership activities were significant predictors in Model 3. By including principal leadership activities as a predictor, 8% of the variance is added in this model (R^2 change = .080). This R^2 change is significant at $p < .001$, with an associated $F(1, 282) = 284.258$.

The beta weights, presented in Table 9, suggest that when all variables were entered together, principal leadership activities contributed most to predicting satisfaction with teaching (beta = .358), with teachers' sense of community following next in line (beta = .112) as a significant predictor. The principal leadership activities variable was a stronger predictor of satisfaction with teaching than was teachers' own sense of community.

Analysis for Research Question 5:

What is the influence of teacher communities on how teachers perceive the effects of state and district standards?

In research question 5, teachers' perception of state and district standards was the dependent variable. In analyzing this question the non-policy amenable items were again considered in the first Model as controls, the measurement of teachers' sense of community was added as an independent variable in Model 2, and principal leadership activities was added in Model 3. Table 10 outlines the hierarchical multiple regression analysis results for this research question.

Table 10.

Hierarchical Regression Analysis of Predictors of Teachers' Perception of State and District Standards

Variable	Model 1			Model 2			Model 3		
	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta	β	S. E.	Stand. Beta
Gender	.111	.047	.045*	.084	.046	.034	.081	.046	.032
Total Students	.000	.000	.019	.000	.000	.035	.000	.000	.031
Percent Eligible Free/Reduced Lunch	.001	.001	.045*	.002	.001	.059**	.002	.001	.058**
Years in current school	-.004	.002	-.029	-.005	.002	-.039**	-.004	.002	-.031
Teacher Sense of Community (TSC)				.083	.008	.184**	.047	.011	.104**
Principal Leadership Activities (PLA)							.151	.027	.130**
	$R^2 = .005$ R^2 change = .005			$R^2 = .038$ R^2 change = .033			$R^2 = .049$ R^2 change = .011		

Dependent Variable: Perception of state and district standards

** $p < 0.01$ * $p < 0.05$

In the first model, the non-policy amenable variables explained .5% of the variance in teachers' perception of standards ($R^2 = .005$, $F(4,2854) = 3.657$ and $p = .006$). Gender and percent eligible for free/reduced lunch were the only significant non-policy amenable predictors of teachers' perception of state and district standards. Female teachers tended to have a more positive perception of state and district standards than males and as the percentage of students eligible for free/reduced lunch increased, so did the perception of state and district standards. When teachers' sense of community was added as a predictor, the number of years teaching in present school becomes a significant predictor along with the percent of students eligible for free/reduced lunch. This combination of independent variables explained 3.8% of the variance in perception of standards ($R^2 = .038$, $F(1,2853)$, $p < .001$). The R^2 change = .033 which means that by adding teachers' sense of community as a predictor, 3.3% of the variance is added to the first model. In Model 3, which adds principal leadership activities as a predictor, the total variance in teachers' perception of standards explained by this model is 4.9% ($R^2 = .049$, $F(1,2852)$, $p < .001$). Principal leadership activities added 1.1% of the variance when included in Model 3.

Teachers' sense of community and principal leadership activities were close in their predictive strength with beta coefficients of .104 and .130 respectively. As teachers' sense of community increased, so did their perception of state and district standards having a positive influence on their teaching. Once again, as teachers' perception that their principals displayed positive, supportive

behaviors increased their perception of the positive influence of state and district standards also increased.

It is interesting to note that for this research question only, the beta coefficient for the percentage of students who are eligible for free/reduced lunch was positive indicating that as the percentage of students who are eligible for free/reduced lunch increases, the teachers' perception of standards having a positive impact on their teaching also increases. One of the goals of the No Child Left Behind Act is to ensure equity across geographic and socioeconomic groups. It is an interesting finding that public, urban, elementary school teachers' perception of standards has a direct relationship with the socioeconomic situation of the students within the schools that they teach.

Summary of Findings

When regressed alone on the outcome variables, the group of non-policy amenable variables of gender, total students enrolled in school, percentage of students eligible for free/reduced lunch and number of years teachers taught in their present school had more of an effect on the variance in teachers' sense of community ($R^2 = .024$) than on the variance in satisfaction with teaching ($R^2 = .013$) and teachers' perception of standards ($R^2 = .005$). Of these non-policy amenable variables, the total number of students enrolled in the school was continually one of the strongest negative predictors of teachers' sense of community. When satisfaction with teaching was analyzed as the outcome variable, the percentage of students eligible for free/reduced lunch was the

strongest negative predictor of the non-policy amenable variables. The percentage of students eligible for free/reduced lunch was also the strongest predictor out of the non-policy amenable variables when regressed on teachers' perception of standards, but this time there was a positive relationship.

Throughout all five research questions, the principal leadership activities variable continually carried the strongest beta weight indicating that it was the strongest predictor of all of the outcome variables of teachers' sense of community, satisfaction with teaching and perception of state and district standards. Principal leadership activities was roughly eight times as strong as facilitating/collaborative school structures and six times as strong as teacher empowerment in predicting teachers sense of community as the outcome variable. When satisfaction with teaching was analyzed as the outcome variable, principal leadership activities was approximately three times as strong a predictor than teachers' sense of community. In the final analysis where teachers' perception of state and district standards was analyzed as the outcome variable, principal leadership activities was most comparable in its predictive strength to teachers' sense of community (beta = .130 compared with beta = .104). For all five research questions principal leadership behaviors had the strongest predictive power than all other independent and non-policy amenable variables.

Chapter V

FINDINGS, CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to investigate the contributory factors to a teachers' sense of community in public, urban, elementary schools in the United States. Because of the increased pressure and expanded requirements put on public school teachers that have resulted from the implementation of the No Child Left Behind Act, this is an extremely relevant topic. Knowledge gleaned from this study may assist education leaders across the United States as work is done to build cohesive, collaborative staffs that work toward a common vision in our public schools.

Critics of outcome based bureaucratic accountability systems claim that reform efforts such as the No Child Left Behind Act (NCLB) have a negative effect on teachers' work (Mathison & Freeman, 2003) and decrease teacher motivation and morale (Finnegan & Gross, 2007). Fostering a strong teacher community guided by a common vision and collective responsibility for students can have a positive effect on teacher performance, commitment, and response to mandates and reform (Gallucci, 2003; Leana & Pil, 2006). With the increased demands and responsibilities expected of teachers in this post-NCLB era, studies of teacher communities and the factors that contribute to them are important for educational leaders and researchers. It seems that outcomes-based, bureaucratic, accountability mechanisms go against the traditional view of the communal, sharing spirit of teacher communities. In a study using pre-NCLB data, Weathers (2006) assessed that the strongest predictor of teachers' sense

of community was their perception of principal leadership activities and behaviors. Studies that analyze contributory factors that lead to teachers' sense of community are scant after the No Child Left Behind Act was put into place. The role of the principal in fostering teacher communities within his/her building and creating more enabling atmospheres in which teachers can work can be an important addition to the conceptual framework surrounding the idea of an enabling bureaucracy set forth by Hoy and Sweetland (2001). The aim of this study was to compare and contrast various predictors of teachers' sense of community in public, urban, elementary schools with the idea that stronger teacher communities led by a facilitating leader would lead to even more enabling structures within schools.

Summary of Study

The study presented here utilized the 2003-2004 Schools and Staffing Survey (SASS) conducted by the United States Department of Education's National Center for Educational Statistics (NCES). Specific questions from the survey were used that measured the constructs of interest. The strength in using the Schools and Staffing Survey is that it provided a robust sample (n = 2859) of public, urban, elementary teachers across the United States. Questions from the survey that pertained to teachers' sense of community, teachers' perception of empowerment through decision making, principal leadership activities, satisfaction with teaching and teachers' perception of the positive effects of state

and district standards on their teaching were all used for the research questions of this study.

There were five research questions that guided the study. The first three questions explored contributing factors that promoted teachers' sense of community. The last two questions discussed the influence of teacher communities on satisfaction with teaching and teachers' perception of state and district standards. The research questions were:

- 1) What influence do principal leadership behaviors/activities have on teachers' sense of community?
- 2) What influence do facilitating/collaborative school policies and structures that promote teacher interaction have on teachers' sense of community?
- 3) What relationship exists between teacher empowerment through the context of teachers' perception of their influence and control in decision making and their sense of community?
- 4) How does teachers' sense of community within their building influence their satisfaction with teaching?
- 5) What is the influence of teacher communities on how teachers perceive the effects of state and district content standards?

A hierarchical regression analysis was used for each question to investigate the predictive strength of each of the independent variables on the outcome variable. For all five research questions a number of non-policy

amenable variables were used in the base model of the regression analysis to see their influence on the dependent variable. These non-amenable variables included size of school, gender of teacher, percentage of students eligible for free or reduced lunch, and the number of years teacher had been teaching in his/her current school. The variable of interest for each research question was added in Model 2 to see the change of variance that would occur with the addition of each independent variable while controlling for the non-policy amenable variables.

This researcher sought to explore the role the principal plays both directly and indirectly on teachers' sense of community, so mediation models were created with principal leadership activities as an independent variable and as a mediator. A recurring theme that emerged in the literature was that simply having facilitating structures and processes for shared decision making in place may not be enough in promoting positive outcomes (Blase & Blase, 1997; Halverson, 2003; Stevenson, 2001). The leader plays an important role in setting up the guidelines for these mechanisms, providing a supportive environment and guiding the group in the development and belief in a shared vision and mission for the school.

Research questions 4 and 5 of this study took the concept of teachers' sense of community further by utilizing it as the independent variable to see its influence on the outcome variables of satisfaction with teaching and teachers' perception of state and district standards having a positive effect on their teaching. By using teachers' sense of community as the independent variable in

the second part of this study, the researcher sought to uncover some additional positive effects of teacher community to add to the extant body of research surrounding this concept. Because of the current debate surrounding the use of accountability mechanisms as a means to reform and improve today's public schools, this researcher was particularly interested in seeing the influence of teachers' sense of community on teachers' perception of state and district standards.

Findings

For the first part of the study (research questions 1, 2 and 3) when the non-policy amenable variables were included in the base model as predictors of teachers' sense of community, the size of the school as measured by student enrollment was the strongest negative predictor of teachers' sense of community. This finding concurred with Weathers (2006) who also found that the size of the elementary school was a significant predictor of teachers' sense of community. As enrollment in schools increased, teachers' sense of community decreased. This may indicate that smaller schools enjoy the added benefit of a more cohesive, collaborative staff. As more independent variables were added in each model of the hierarchical regression predictability increased. What follows is a summary of findings for each research question.

Research Question 1

What influence do principal leadership activities have on teachers' sense of community?

The independent variable of principal leadership activities was found to be a significant strong predictor of teachers' sense of community. The predictive strength of this independent variable (measured by the beta coefficient) was found to be close to eight times as strong as any of the other non-policy amenable predictors of teachers' sense of community such as size of school and percentage of students who are eligible for free and reduced lunch. This finding aligned with Royal and Rossi (1999) and Weathers (2006) who found that the strongest predictor of teachers' sense of community was teachers' perception of administrator support. This is an important result particularly for public, urban elementary schools that are often characterized as larger institutions that service students of lower socioeconomic levels. The support and leadership from the principal is extremely important in building cohesive staffs.

Research Question 2

What influence do facilitating/collaborative school policies and structures that promote teacher interaction have on teachers' sense of community?

For this research question, the researcher sought to explore the impact of a structural component (regularly scheduled collaborative time within public, urban, elementary schools) on teachers' sense of community. Teachers that

reported that they participated in regularly scheduled collaboration with other teachers on the issues of instruction were more likely to feel a stronger sense of community with their colleagues. The predictive strength for facilitating/collaborative structures ($\beta = .076$) was comparable with the predictive (negative) strength of total students enrolled ($\beta = -.076$). When principal leadership activities was added as an independent variable in model 3 of the hierarchical regression analysis, it contributed by far the most in predicting teachers' sense of community. In fact, the strength of leadership behaviors was roughly eight times as strong as the strength of having regularly scheduled collaborative time together in predicting teachers' sense of community. It was interesting to note that with the addition of principal leadership activities as a mediating variable for this question, the predictability of collaborative school structures decreased by approximately 38%, indicating partial mediation. It was found that the effects of collaborative structures on teachers' sense of community were both direct and indirect through its influence on principal behaviors. This finding parallels the conclusions of Cannata (2007) who found that even though charter elementary schools are characterized by the rich and focused collaborative opportunities and greater teacher involvement in decision making as compared to traditional elementary schools, there was very little difference in teacher community between charter and traditional elementary schools and that the difference that did exist was mediated by the effect of a supportive principal. Halverson (2003) found similar results when studying the influence that principals

can have on the structures and artifacts already in place in their schools to ensure successful outcomes.

Research Question 3

What relationship exists between teacher empowerment through the context of teachers' perception of their influence and control in decision making and their sense of community?

In research question 3, the researcher explored the amount of decision making power teachers felt they had and investigated its role as a mediator of principal leadership behaviors. The beta coefficient for teacher empowerment (.092) showed that teachers that reported higher levels of empowerment through decision making in public, urban, elementary schools had a greater sense of community with fellow staff members. The results showed that teacher empowerment also served as a slight mediator of principal leadership behaviors in predicting teachers' sense of community. The predictive power of principal leadership activities is only slightly reduced when teacher empowerment was added to the regression model. The independent variable principal leadership activities was once again the strongest predictor of teachers' sense of community, even when regressed with teacher empowerment. Principal leadership activities were six times as strong in predictive power than teacher empowerment. This finding concurred with Blase and Blase (1997) who found similar results when analyzing the relationships between various principal behaviors and measures of teacher empowerment.

Research Question 4

How does teachers' sense of community within their building influence their satisfaction with teaching?

For the second part of this study, teachers' sense of community was used as the independent variable in order to examine its effects on teacher related outcomes. In this case, when the non-policy amenable variables were initially regressed on satisfaction with teaching, only the total number of students enrolled and the percentage of students who are eligible for free and reduced lunch were significant negative predictors of satisfaction with teaching. Once again, when all independent variables were taken together, principal leadership activities and behaviors contributed by far the most towards satisfaction with teaching. Although teachers' sense of community was a significant predictor of satisfaction with teaching (beta = .112), activities and behaviors of the principal were more than three times as strong a predictor (beta = .358) of this outcome variable.

Research Question 5

What is the influence of teacher communities on how teachers perceive the effects of state and district standards?

When non-policy amenable variables, teachers' sense of community and principal leadership activities were all regressed on teachers' perception of state and district standards only percentage of students eligible for free or reduced lunch, teachers' sense of community and principal leadership activities were

found to be significant positive predictors. Teachers' sense of community and behaviors of the principal were close in their predictive strength (beta = .104 and .130 respectively) for this research question. Of all five research questions posed in this study, principal leadership activities and behaviors did not stand out as much for this research question in its comparative strength against other independent variables in predicting how teachers perceived the effects of state and district standards. What is also interesting to note is that for this research question only, it was found that the percentage of students who were eligible for free/reduced lunch actually had a positive influence on teachers' perception of state and district standards. It seems that public, urban, elementary school teachers who teach in schools serving lower socioeconomic students tend to have a more positive perception of state and district standards.

Implications

The research presented in this study uncovered a number of contributing factors to teachers' sense of community. The analysis found that when regularly scheduled collaborative time on issues of instruction and teacher control and influence on decision making was a part of the school structure, what resulted was a stronger feeling of community among teachers. It was clear that principal leadership behaviors contributed by far the most in predicting teachers' sense of community. These overall findings concur with the conclusions of Weathers (2006) who conducted a similar study using pre-NCLB data. He found that teacher empowerment through decision making and collaborative school

structures both had a significant effect on teachers' sense of community measures. Weathers also found that principal leadership activities contributed the most as compared to other indicators of teachers' sense of community.

If a stronger sense of community is the aim, principals need to incorporate opportunities for elementary school teachers to collaborate on issues of instruction. Given the fact that principal leadership behaviors mediated the effect of regular collaborative time on teachers' sense of community tells us that simply having these structures in place may not be enough; the role of the principal and his/her behaviors cannot be underestimated. This relationship also exists for teacher decision making power and its influence on teacher communities. Allowing teachers decision making power in schools on such things as classroom curriculum and school policies is a means of promoting teachers' sense of community in urban elementary schools, but effective principal leadership is the most important contributing component in building strong teacher communities. Principals of public, urban, elementary schools need to not only distribute decision making power, but must also provide clear expectations, support, encouragement, and a vision for the type of school that they want in order to build a strong teacher community. Expanding professional development opportunities for school leaders is a logical next step. Such training could include programs where principals explore specific activities that lead to strong teacher communities or where they shadow others that have successfully fostered teacher communities within their buildings.

As researchers look at teacher burnout and satisfaction with teaching measures, results from this study indicate that teachers' perception of the principal and his/her behaviors and activities were significant predictors of satisfaction with teaching. Teachers who reported a stronger sense of community with fellow colleagues reported being happier with teaching, but this relationship was not as strong as contributions of the principal in predicting satisfaction with teaching. Principals need to be aware of just how much influence they have through their actions on so many areas of the school and community.

For teachers to have a more positive perception of state and district standards, sense of community and principal leadership behaviors are important components in facilitating a positive response. This is an important finding as educational leaders continue to update and modify state and federal mandates for schools. Critics of the No Child Left Behind Act claim that top-down strategies result in a lack of buy in and disgruntled teachers. As we face major changes ahead with the adoption of common core standards, research question five offers encouragement to leaders as they work to foster a more positive reaction to such reform efforts. Principals play a major role in a positive roll-out and adoption of standards, both directly and indirectly through promotion of teacher communities and through their own actions and behaviors.

The most striking finding across all five research questions is the relative strength of principal leadership and activities as compared to other independent variables in predicting the outcome variables in each of the research questions.

Educational leaders need to be aware of their influence and power in promoting positive outcomes within their schools. Teachers who know what their principal expects of them are aware of the principal's goals for the school, feel valued, supported, encouraged and feel "backed" by their principal, and are recognized for their work, tend to report higher levels of teacher community, have a higher satisfaction with teaching and a more positive perception of state and district standards.

Future Research

Future research in the area of teacher communities and other possible contributory factors that lead to them that were not covered in the present study can prove to be beneficial. This study was limited in the fact that it used specific questions from the Schools and Staffing Survey to measure the constructs of the study. Undoubtedly there are other possibilities and measures that could be studied that may be outside the realm of SASS questions. A recommendation for future studies would be research that breaks out specific principal leadership behaviors to see which specific ones have the greatest affect on teachers' sense of community. This study could also be expanded by using other populations such as secondary and rural schools to see if similar results are found for these different populations. Directly linking teachers' sense of community to student achievement is another area that could be explored in future research.

An interesting finding from this study is the fact that teachers who serviced high populations of students that were eligible for free and reduced lunch reported that state or district standards had a more positive influence on their

teaching. Doing a more in-depth analysis of these particular teachers to learn more about their thoughts and to hear their voices may yield important information related to the nuances of working in urban schools in higher poverty areas in this era of heightened accountability. Taking this idea further, a study that looks at the influence that teachers' sense of community has on their decision to leave the profession would also provide valuable information regarding teacher communities. If teachers' sense of community is important in building commitment, then this relationship should be scrutinized.

The concept of enabling bureaucracies, as posited by Hoy and Sweetland (2001), should be explored more in-depth given our current bureaucratic, accountability arena resulting from the No Child Left Behind Act. One of the benefits of an enabling bureaucracy is that it sets up a system that helps rather than hinders attainment of goals of the job. Enabling bureaucracies were discussed throughout this study and it has been suggested that teachers' sense of community could be included as an additional component in future studies because the result might be even more enabling structures. More attention towards developing enabling bureaucracies that include teacher communities as a component might be just the right approach leaders should use to promote greater teacher satisfaction and commitment within schools. The fact that leaders played such an important role in promoting positive outcomes throughout this study is promising, and people entering the field of educational leadership should be encouraged by these results.

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Appendix A

Appendix A: Cronbach's Alpha Item Analysis for Teachers' Sense of Community

	<u>N</u>	<u>Mean</u>	<u>Variance</u>	<u>SD</u>		
Statistics for Scale	3	9.64	3.806	1.951		
	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Range</u>	<u>Max/Min</u>	<u>Variance</u>
Item Means	3.214	3.107	3.297	.190	1.061	.009
Item Variances	.623	.522	.710	.189	1.361	.009
Inter-Item Covariances	.323	.315	.329	.013	1.042	.000
Inter-Item Correlations	.524	.469	.570	.101	1.216	.002
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted	
Agree-teachers enforce rules	6.53	1.816	.563	.324	.724	
Agree-coll share values	6.34	1.978	.643	.415	.638	
Agree-staff cooperation	6.40	1.881	.588	.363	.690	
Reliability Coefficient for 3 items			<u>Alpha</u>	<u>Standardized Item Alpha</u>		
			.763	.767		

Appendix B

Appendix B: Cronbach's Alpha Item Analysis for Principal Leadership Activities

	<u>N</u>	<u>Mean</u>	<u>Variance</u>	<u>SD</u>
Statistics for Scale	5	16.76	10.484	3.238

	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Range</u>	<u>Max/ Min</u>	<u>Variance</u>
Item Means	3.353	3.086	3.502	.416	1.135	.026
Item Variances	.649	.508	.752	.244	1.481	.009
Inter-Item Covariances	.362	.287	.427	.139	1.485	.002
Inter-Item Correlations	.561	.488	.621	.133	1.273	.002

	<u>Scale Mean if Item Deleted</u>	<u>Scale Variance if Item Deleted</u>	<u>Corrected Item-Total Correlation</u>	<u>Squared Multiple Correlation</u>	<u>Cronbach's Alpha if Item Deleted</u>
Agree-principal commun. expec	13.26	7.373	.673	.490	.838
Agree-admin supportive	13.42	6.622	.718	.528	.825
Agree-principal enforces discipline	13.36	6.960	.671	.460	.837
Agree-principal-knows school	13.33	6.965	.708	.521	.828
Agree-staff recognized	13.68	6.776	.655	.437	.843

Reliability Coefficient for 5 items	<u>Alpha</u> .863	<u>Standardized Item Alpha</u> .865
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Appendix C

Appendix C: Cronbach's Alpha Item Analysis for Teacher Empowerment

	<u>N</u>	<u>Mean</u>	<u>Variance</u>	<u>SD</u>		
Statistics for Scale	13	34.97	44.049	6.637		
	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Range</u>	<u>Max/Min</u>	<u>Variance</u>
Item Means	2.690	1.652	3.633	1.982	2.200	.447
Item Variances	.767	.419	1.062	.643	2.533	.059
Inter-Item Covariances	.218	.036	.595	.560	16.701	.015
Inter-Item Correlations	.283	.068	.568	.500	8.335	.016
	<u>Scale Mean if Item Deleted</u>	<u>Scale Variance if Item Deleted</u>	<u>Corrected Item-Total Correlation</u>	<u>Squared Multiple Correlation</u>	<u>Cronbach's Alpha if Item Deleted</u>	
Influence-performance standards	32.45	36.538	.536	.378	.823	
Influence-curriculum	32.55	35.834	.624	.471	.816	
Influence-professional development content	32.47	37.164	.551	.374	.822	
Influence-teacher evaluation	33.32	38.605	.484	.340	.827	
Influence-teacher hiring	33.05	37.947	.444	.335	.830	
Influence-discipline	32.42	36.730	.552	.391	.822	
Influence-school budget	32.98	37.734	.489	.329	.827	
Control-selecting materials	32.48	36.829	.492	.366	.827	
Control-selecting content	32.28	36.471	.533	.459	.823	
Control-selecting technique	31.47	39.422	.463	.402	.829	
Control-evaluating students	31.40	40.039	.422	.390	.831	
Control-discipline	31.45	40.114	.408	.322	.832	
Control-homework	31.34	41.092	.306	.258	.837	
Reliability Coefficient for 13 items		<u>Alpha</u> .838	<u>Standardized Item Alpha</u> .837			

Appendix D

Appendix D: Cronbach's Alpha Item Analysis for Satisfaction with Teaching

	<u>N</u>	<u>Mean</u>	<u>Variance</u>	<u>SD</u>
Statistics for Scale	5	15.34	9.982	3.159

	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Range</u>	<u>Max/Min</u>	<u>Variance</u>
Item Means	3.068	2.887	3.217	.329	1.114	.018
Item Variances	.752	.564	.906	.342	1.607	.019
Inter-Item Covariances	.311	.250	.424	.175	1.698	.003
Inter-Item Correlations	.417	.316	.534	.218	1.692	.003

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Disagree-teaching not worth it	12.12	7.128	.571	.329	.736
Disagree-leave for better pay	12.32	6.967	.507	.269	.753
Disagree-thinking about transfer	12.31	6.699	.503	.270	.757
Disagree-not enthusiastic	12.45	6.107	.631	.412	.711
Disagree-too tired for school	12.16	6.801	.570	.344	.733

Reliability Coefficient for 5 items	<u>Alpha</u> .779	<u>Standardized Item Alpha</u> .782
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