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UNIVERSITY OF CALIFORNIA, SAN DIEGO
CALIFORNIA STATE UNIVERSITY, SAN MARCOS

The Role of Research Evidence in School Improvement: A Case Study of Corrective
Action Schools

A dissertation submitted in partial satisfaction of the requirements for the degree of
Doctor of Education

in

Educational Leadership

by

Minerva Salas

Committee in charge:

University of California, San Diego

Professor Alan J. Daly, Chair
Professor Janet Chrispeels

California State University, San Marcos

Professor Robin Marion

2011

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The Dissertation of Minerva Salas is approved, and it is acceptable in quality and form
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Chair

University of California, San Diego
California State University, San Marcos

2011

DEDICATION

I dedicate this dissertation to my parents, brother, and sisters. It is because of their many sacrifices that I have been able to accomplish this dream. Thank you mom and dad for being the models of hard work, commitment, love, and humility.

I also would like to dedicate this dissertation to all of my nieces and nephews who instill hope in me everyday with their bright minds and kind hearts.

I would also like to dedicate this work to the many students that have touched my life. You inspire me to continue searching for opportunities to learn.

Finally to God who continues to generously bless my life.

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ABSTRACT OF THE DISSERTATION

The Role of Research Evidence in School Improvement: A Case Study of Corrective
Action Schools

by

Minerva Salas

Doctor of Education in Educational Leadership

University of California, San Diego, 2011

California State University, San Marcos, 2011

Professor Alan J. Daly, Chair

The difference in performance between students of color and their white counterparts, better known as the academic achievement gap, in America has prompted many scholars, practitioners, and researchers to seek solutions that will help eliminate it. Researchers are beginning to investigate underlying social networks and tenets of organizational learning for the purpose of gaining insight into structures that support, constrain, or have no impact on the diffusion of research evidence within schools and school districts. This study investigated the processes two high schools in corrective action, sanctioned under the No Child Left Behind Act, engaged in to identify problems and solutions, and how these schools defined, acquired, used, and diffused research evidence in service reform. There has been very limited research done this area. Future research efforts that continue to investigate the convergence of research evidence, organizational learning, and social networks in school districts across the country have the potential to improve student achievement.

CHAPTER 1

Introduction

In contemporary America today, there has been much publicity about the struggles of our public school system. Many critics have drawn attention to the persistence of the ever-increasing achievement gap as a sign of our failing schools. The federal government passed the No Child Left Behind (NCLB) Act in 2001 in an effort to address this concern. NCLB requires all schools to close the achievement gap by having all students performing at a proficient level on state assessments based on state established standards by the year 2014.

The NCLB law has imposed high accountability demands and sanctions for schools not making Adequate Yearly Progress (AYP). Schools not making AYP, not achieving expected academic growth targets, are placed in “Program Improvement” (PI) status, and receive sanctions. The sanctions become progressively more restrictive each year, and after seven consecutive years end with schools facing complete restructuring or being taken over by the state. There are increasing numbers of schools entering sanction status each year. Although the intention of this law was to increase student performance, this law has actually produced unintended new challenges for already struggling schools (Mintrop, 2004).

In recent years, there has been research conducted with successful districts and schools, and the findings indicate many common features in these effective districts/schools (Marzano, 2003; Skrla, Scheurich, & Johnson, 2000; Togneri & Anderson, 2003). For example, successful schools have strong leadership, challenging goals and effective feedback, data-driven instruction, and professionalism (Marzano,

2003; McCallum, 1999; Ross, 2004; Teddlie, Kirby & Stringfield, 1989). Although research has identified examples of effective schools and districts, it appears their successful strategies have not been effectively shared or replicated in many struggling schools (Togneri & Anderson, 2003; Mintrop, 2004; Mintrop & Trujillo, 2007).

When reviewing current research on school performance, there appears to be a discrepancy between schools that have students performing well and others that are failing and falling into status. One explanation for this discrepancy could be linked to how schools learn and share new strategies for improving student performance at an organizational level. Organizational learning concepts may play a key role in dealing with schools in need of improvement (Knapp, 2008; Silins, Mulford, & Zarins, 1999). Learning is a social experience, and as such an organization would benefit from exploring the social networks that support or hinder the spread of new learning (Tsai, 2003; Penuel, Frank, & Krause, 2006). Organizations should not only examine the structures of their social networks, but the quality of the knowledge, information, and innovations they are sharing through these networks (Nutley & et al., 2007; Nutley & Davies, 2008).

The NCLB Act has stated that reform efforts should involve the use of scientifically-based evidence (SBE) in practice. Even though the NCLB legislation calls for the need to use SBE, there is little research indicating how schools use it to improve daily practice (Honig, 2008; Smith, 2003). Researchers are beginning to recognize that this may be an important area to study in reform efforts, and that the use and sharing of SBE needs to occur at an organizational level (Honig, 2008; Daly & Finningan, 2009).

Despite the apparent emphasis on research of the NCLB law, there are still a great number of failing schools. This may be attributed to the processes schools use to

diagnose their learning problems and the solutions they select to remediate these problems (Daly & Finnigan, 2009). It is beneficial to explore how schools use RE that aligns to their students' needs and any holes in their curriculum and whether concepts in organizational learning and social networks theories support this practice. There is little empirical evidence concerning the processes schools use in school decision-making during school reform efforts, especially in corrective action and restructuring schools (Daly & Finnigan, 2009).

Statement of the Problem and Rationale for the Study

The NCLB legislation has created a conundrum for public education. The number of schools under corrective action is predicted to climb to 6,063 by 2014 (Daly and Finnigan, 2009). In California, where this study will take place, 2,796 schools serving over one million students were designated as PI during 2009-10, representing nearly 45% of all the schools in the state receiving federal funding (California Department of Education [CDE], 2009). The number of Local Education Agencies (LEA) is also increasing with 298 districts in PI for the 2009-10 school year, representing 47 percent of all districts in the state receiving federal funds. Nearly 60 percent of districts in California have been in PI for multiple years (CDE, 2009). Moreover, despite numerous efforts at reform (Mintrop, 2004; Mintrop & Trujillo, 2007), only 1 percent of LEAs improved enough to be removed from PI status (CDE, 2009). Ironically, under NCLB students who have been traditionally 'left behind,' and for whom presumably the law was enacted, are now educated in systems that disproportionately suffer the effect of sanctions (Stullich, et al., 2006; Sunderman, Kim & Orfield, 2005). This worsening

situation has been described as one of the most pressing social justice-civil rights issues facing the United States (Sunderman et al., 2005).

The NCLB Act requires schools to improve through four principles, one of which is an emphasis on proven teaching methods. The law makes approximately 110 references to the need for the use of scientifically-based research (SBR) in district and school reform (Smith 2003). The emphasis on proven methods illustrates the importance of SBR. The NCLB law requires schools to use SBR to improve student achievement and close the gap for marginalized students, but has not provided a road map as to how schools should accomplish this goal. There is little empirical evidence that substantiates district and school use of SBR in reform efforts and there is much ambiguity as to what RBE means and how it should be applied, especially in program improvement schools (Honig & Coburn, 2008). Research indicates that SBR may not be used regularly in reform efforts (Nutley, Walter, & Davies, 2003; Nelson, Leffler, & Hansen, 2009). One of the reasons that SBR may not be taking hold may be that the organization is not learning or effectively sharing information, knowledge, and innovation throughout the organization.

Researchers are beginning to explore the importance of organizational learning to address requirements needs of schools in need of improvement (Honig, 2008). Organizational learning is characterized by a need or a problem that leads to a collective search to a solution (Leithwood, Leonard, & Sharratt, 1998), such as not meeting achievement goals. Organizational learning is the process in which members of an organization identify and act on information that leads to actions that result in achievement of the groups' goals (Honig, 2004; Mulford, 1998) For organizational

learning to occur the right conditions have to be in place to enable an organization to learn (Huber, 1991).

Organizational learning promotes the spread of social capital in organizations. Social capital refers to the “goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate actions” (Adler & Kwon, 2002, p.17). This type of learning is a social act, involving social interactions, and therefore the relations between people should be examined as a part of understanding an organizational dynamic. An analysis of the concepts underlying organizational theory may be beneficial to help schools facing sanctions in order to promote effective teaching and learning strategies throughout the organization.

According to Honig (2004), organizational learning has to happen purposefully in organizations as new information is acquired and used. Research suggests that one important aspect of organizational learning in school reform could be the ability of the organization to effectively share knowledge and innovation throughout the entire organization (Fullan 2005; Penuel, Frank, & Krause, 2006). Schools need to be able to effectively share information and new learning, such as effective strategies based on RE, throughout the organization in order for schools to move all their students towards proficiency. The dissemination of new learning throughout the organization will require effective social network connections between individuals in an educational system (Chrispeels 2004; Datnow & Stringfield, 2000).

School facing sanctions, especially those in the corrective action phase, may benefit from investigating how to build strong social network structures into their organizations to help disseminate new learning throughout the entire organization.

Research suggests that networks with strong ties, that have people in the right places to connect different groups with information, communication, and innovation, are important in organizational reform efforts (Datnow, 2000; Song, Nerur, & Teng, 2007). There is little empirical evidence about how social networks in schools and districts support or are neutral to communication and the transfer of knowledge.

Social Network Analysis is a method for analyzing the network structures of an organization. Research is just beginning to tie this key concept into school reform (Burch & Spillane, 2004; Coburn & Russell, 2008). In addition to having effective and efficient social networks to help disseminate new learning throughout the organization, it is valuable to explore the quality of the content being shared throughout the organization (Datnow & Stringfield, 2000; Nutley & Davis, 2008 ; Knapp, 2008; O'Day, 2002).

Given the ever-increasing number of schools and districts needing improvement, it is important to investigate ways in which schools identify problem areas, find solutions, and determine the extent to which research evidence is used to improve. Also critical to affecting systemic change in failing schools is to investigate how knowledge is transferred throughout the organization. With many schools struggling, organizational learning might be a new avenue to explore as a way to better understand how knowledge enters the system, is disseminated, and finally supports or transforms practice. Educators can begin measuring processes that are put in place at school sites to determine effectiveness that could lead to reaching desired school goals (Griffith, 2003).

In order to address this lack of research, there is a need to investigate how schools define problems affecting achievement, determine strategies based on research evidence to solve problems, and apply it to inform daily practice. This kind of learning

needs to occur at the organizational level with social networks to support the dissemination of the new learning throughout the organization (Daly & Finnigan, 2009). For students failing in systems that are not meeting their needs, there is urgency for finding answers to these kinds of inquiries. Therefore, research addressing these issues is timely for deepening knowledge about addressing district and school reform.

Purpose of the Study and Research Questions

NCLB has labeled many schools in Program Improvement status. A school enters the corrective action phase as a result of not meeting AYP for three consecutive years. If schools continue to fail they will be restructured and eventually taken over by the state.

In all of these stages schools are supposed to be informing their practice using research evidence, yet many of the professionals working in these schools and for these schools have limited knowledge of what this means and direction for how to implement it. Research suggests that these schools have limited access to new information or resources to help deal with the changes needed. There is a need to fill the void in this empirical research. Therefore, this is a study that investigated the processes school sites used to identify problems, define solutions and use RE in decision making in two corrective action high schools. Also investigated the ways and to what extent RE was disseminated through the schools.

The purpose of the study was not to define research evidence, but rather to investigate what staff believed it meant in terms of its application to school reform.

The study focused on the following questions:

1. What are the processes that schools in corrective action use to diagnose problems and identify solutions?

2. How do schools in corrective action define, acquire, use, and diffuse research evidence?
3. In what ways and to what extent is information, knowledge, and innovation diffused throughout corrective action schools through social networks?

Overview of the Methods

The study utilized a mixed methods case study design. It was part of a larger longitudinal study involving high schools in corrective action in California and New York. For this study, case studies were conducted in two high schools in corrective action status in a large urban district. The data collection and analysis included interviews and documentation review. Extant survey data from the larger, longitudinal study was also included. Protocols used for each data set were analyzed through the frameworks of organizational learning and social network analysis as they related to the definition, acquisition, use, and diffusion of research evidence. Extant data from the larger study was used to corroborate findings from the interviews, and document review.

Staffs at the two schools and district personnel were interviewed to ascertain information related to the process schools undertake in reform efforts. The participants in the interviews were chosen through the use of a purposeful selection process based on principal input and district personnel's responsibilities for improvement reform. The document review included analysis of artifacts relevant to school improvement efforts, such as the School Site Plan for Student Achievement and achievement data. The data analysis encompassed a variety of measures. The qualitative data were analyzed and studied for codes and themes related to the questions asked in the study.

Significance of the Study

There is a potential benefit from this study to inform educators about effective ways to disseminate knowledge and strategies based on research evidence throughout a school. This helps promote decisions based on best practices grounded in results. The study may be especially beneficial in understanding reform efforts in underperforming schools that are in corrective action under NCLB. It provides insight into the importance of the process involved in defining problems and selecting solutions that increase the use of research evidence in schools in order to assist schools in making effective decisions leading to improved student achievement. This study shared practitioners' perceptions of how they worked towards growth in the current accountability climate, and this can illuminate the importance of bridging the work between researchers and practitioners in understanding how to address the challenges of the declining achievement gap. The results have positive implications for policy, practice, theory, and future research by getting us closer to being able to provide social justice to students that are most commonly left behind under NCLB.

Organization of the Study

There are five chapters in this dissertation. Chapter one offers an overview of the study. Chapter two is a review of three areas of literature: organizational learning, social network theory, and research evidence. Chapter three describes the methods, procedures and instruments used. Chapter 4 includes an analysis of the data collected, and Chapter 5 provides a discussion of the findings and makes recommendations. Organizational learning and social networks were utilized as the frameworks, or lens through which the research evidence use was examined.

CHAPTER 2

Introduction to the Literature

One of the most significant pieces of legislation in recent years affecting educational reform was the passing of the NCLB Act of 2001. The law was intended to help schools improve their performance, especially highlighting the need to close the achievement gap. The Act set targets or goals for all children to be performing at proficient levels based on statewide assessment by the year 2014, and embedded sanctions for schools not meeting the targets as a way to enforce the law's expectations (Orfield, Kim, Suderman, & Greer, 2004). However, with its high accountability demands and progressive sanctions, the result has been an increase in the number of schools entering "Program Improvement" status (CDE, 2009).

Research suggests that there may need to be a shift in the way educators address reform efforts (Mintrop & Trujillo, 2005). This change will require a move from a focus on individualized parts of an organization to a focus on the whole organization as one interconnected unit (Smilie & Evans, 1996). In order to understand how organizations improve outcomes, it may be beneficial to examine the concepts involved in organizational learning (Silins, Mulford, & Zarins 1999). Organizational learning is the process in which members work collectively to arrive at solutions to the challenges facing their organization (Chrispeels, 2004; Spillane, 2006).

In addition to the role organizational learning plays in reform efforts, some investigation into how organizations share new learning with all their members will be illustrative. This involves examining the existence and function of networks that facilitate

access to and sharing of knowledge throughout the system. Social network theory may provide insight into how knowledge is acquired and disseminated.

A final aspect of understanding reform may involve examination of the quality of the strategies for improvement that are shared. The NCLB Act has clearly called for the need to use RE in educational reform. Using RE effectively to improve practice and increase student performance requires an understanding and awareness of the problems affecting the lack of achievement and knowledge of strategies to address these issues (Daly & Finnigan, 2009; Tseng, nd). This new approach to reform may be necessary in order to move more schools out of the “Program Improvement” status, especially those in the corrective action phase.

Therefore this is an exploration of the relationship between organizational learning, social networks, and RE in reform efforts. The focus is on how the organization uses RE in practice, and social networks that support, do not impact or hinder the implementation of RE within schools and throughout the district. This inquiry attempts to unpack the concepts of organizational learning as they relate to RE and social network analysis in service of improved student achievement.

Current Educational Context

The NCLB has established accountability requirements for all schools and school districts. Schools and districts have responded to accountability demands through increasing teacher quality, reforms, and disaggregated data analysis (Mintrop, 2004; Mintrop & Trujillo, 2007). However, instead of achieving in the endeavor to close the achievement gap, there have been more and more schools surfacing as failing schools (California Department of Education [CDE], 2009).

The law has not provided any direction or answers concerning how schools are to achieve their goals. Although research has identified examples of effective schools, many more schools exist in which not all students are successful. According to the Center on Education Policy (2006), there was a 49% increase in schools in restructuring in California (restructuring occurs after five years of corrective action sanctions) due to the raise in AYP targets. More critically, the majority of those schools are in urban districts, where students who have been marginalized students attend. The trend continues and every year there is an increase in the number of schools facing sanctions. During 2009-2010, in California alone, 2,796 schools were designated as 'Program Improvement' (CDE, 2009).

Along with the accountability sanctions in NCLB, the Act also requires that all schools implement RE to improve teaching practice and promote student achievement. One of the four principles of NCLB is an emphasis on using proven teaching methods. These teaching methods are to be grounded in research evidence. The NCLB law uses the term research evidence 110 times in its document (Smith 2003), yet educators have no common understanding or agreement on what the term 'evidence' means and how it is being used for improvement (Honig & Coburn, 2008). Scholars have suggested that research is the blending of wisdom and practice (Smith 2003). However, it is also argued that for many years the emphasis has been more on anecdotal wisdom than empirical research (Smith, 2003).

Although NCLB was implemented in 2001, there is now a renewed interest in exploring the use of RE since attempts to disseminate research information have previously had little success (Nutley, Walter, & Davies, 2003). There has been limited

empirical research conducted on the use of RE in classroom practice (Nelson, Leffler, & Hansen, 2009). Much of the early study of practice based on RE has been done in other fields of study. The intended goal of NCLB was to help school practitioners become savvy about what works in improving student performance, and essentially close the achievement gap that exists in many schools around the United States.

Researchers are beginning to address the lack of a common understanding for “research evidence”, and are increasingly aware of the need to use it in successful school reform (Davis, 1999; Slavin, 2002). For example, Pfiffer and Sutton (2000) have explored the concept of the knowing-doing gap. They discuss the disconnect between knowledge and action. In school settings, there may be a need for additional study on the processes schools undertake to diagnose the problems affecting student learning and achievement, and the alignment of the solutions selected to remediate those problems (Daly & Finnigan, 2009). There may be a need to examine these processes at the organizational learning level for system change to occur.

Some studies have suggested that schools tend to draw on existing practices and routines in working toward improvement (Mintrop & Trujillo, 2007). This process of accurate problem identification and selection of RE solutions may be inherent in effective schools and may be contributing to why some schools are successful at exiting sanctions, and others are not. Not only is there a need for educators to know what the problem is, they also need to match the problem with effective RE to arrive at appropriate solutions (Argyris & Schon, 1996). Nonetheless, research literature in a number of other areas suggests potential approaches that could be fruitful to pursue if we are to achieve the goals of NCLB.

Research evidence has to match specific contexts, be accessible and disseminated in an efficient way at the organizational level for positive change in student performance to occur. This is predicated on the premise that the organizational culture is accepting of innovation and supportive of knowledge and information exchange (Levitt & March, 1988; Rogers, 2003). In order to fill the knowing-doing gap, districts and schools may need to start by investigating how their organizations work as a whole (Nutley, Walter, & Davies, 2003). School reform may need to involve organizational learning skills as well as addressing the quality of the content in reform efforts (Davis, 1999; Silins, Mulford, & Zarins 1999).

As learning is ultimately a social exercise, it is beneficial to examine social networks in school settings. Research indicates that the use of social networks can play a critical role in organizational performance, communication, knowledge transfer, innovation, and productivity (Song, Nerur & Teng, 2007). These factors may support the implementation of RE in education. According to Datnow (2000) successful schools tend to have tighter networks of communication that enhance social capital and its spread throughout the organization. The literature on social networks is beginning to offer insights into what supports or constrains organizational learning (Knapp, 2008).

Importance of Organizational Learning

Recent research is beginning to investigate the importance of underperforming schools and the need to analyze the quality of the solutions they select when addressing the problems that contribute to under achievement (Corcoran, Fuhrman, & Belcher, 2001). The possibility that poor solutions may be implemented emphasizes the value of using research evidence in reform efforts. The process for effectively selecting and using

RE in improvement efforts may need to improve at an organizational level (Daly, 2008). Organizational learning supports the notion that in order for an organization to experience success, all members must take on the responsibility of learning, sharing the learning, and engaging collectively in working towards desired goals (Honig, 2004; Mulford, 1998). Reform efforts, especially in corrective action schools, cannot occur in isolated classrooms or sporadically on a campus. New strategies and innovation need to be shared throughout the organization for fundamental change to take hold (Honig, 2004).). In order for this to happen, it would be beneficial for schools and districts to understand the underlying concepts involved in organizational learning (Honig, 2004).

Organizational Learning Theory

The concept or theory of organizational learning comes from the fields of business and management. Scholars and practitioners have studied organizational learning as a way to improve the output of organizations for profit and growth. This was done in an effort to help businesses resist stagnancy and maintain a competitive edge (Levitt & March, 1988; Senge, 1990). There are many definitions of organizational learning, but all share a common premise (Fiol & Lyles, 1985; Huber, 1991). Organizational learning is the process by which members of an organization identify and act on information that leads to achievement of the groups' goals (Honig, 2004; Mulford, 1998). The theory of organizational learning is based on the premise that an organization must have the potential to learn, unlearn, or relearn based on its past behaviors (Fiol & Lyles, 1985).

Organizational learning is more than the sum of the learning of individual members; it increases the collective efficacy of the organization. Organizational learning

is transmitted by way of organizational histories and norms, which preserve behavior. A group's effectiveness is summarized by Hackman and Morris (1995) in three themes: the effort by group members, their level of skill and knowledge, and the performance strategy they apply.

Organizational learning involves developing and maintaining systems that influence members and are conveyed to others by way of the organization histories and norms (Lawrence & Dyer, 1983; Martin, 1982; Mitroff & Kilmann, 1976). The new learning will reflect the organizations' history and cultures, and will dictate what and how an organization learns and what the organization will retain (Levitt & March, 1988). Organizations that are open to learning create cultures conducive to learning, and develop strategies that allow for flexibility within the organization. They build structures for innovation and the exchange of new ideas. Their environments have permeable boundaries and have cooperative personnel (Fiol & Lyles, 1985).

According to Huber (1991) there are four phases of organizational learning. In the first phase, organizations acquire new knowledge. This may be accomplished by the sharing of information from members already in the organization, or from studying similar organizations in the field, or from new members joining the organization. In the second phase, the organization shares information throughout the entire organization. This can occur when a single source shares the information or through building collegial relationships, or by a combination of the two. New information may begin with someone at the top of the organization but then spreads laterally. The third phase involves interpretation of the learned information. This may result in a change in organizational behaviors, norms, and routines (Argyris & Schon, 1978). The final stage occurs when the

organizations store the new learning in organizational memory. The new learning becomes part of the organization's culture and will be spread to new members through organizational norms (Huber, 1991).

Another aspect in organizational learning theory relevant to school improvement efforts may deal with the level of change related to single-loop and double-loop learning. Employing a single-loop approach to meeting desired goals, a school or district might implement changes based on existing organizational norms. However, this level of change may not produce the level of achievement desired. A double-loop approach would require implementing changes that are not within the organizational norms creating fundamental change. (Argyris & Schon, 1978).

In businesses and organizations, organizational learning is manifested through communities of practice (Wenger, McDermott, & Snyder, 2002). Developing communities of practice is a cornerstone of an effective knowledge sharing strategy. Communities of practice consist of teams and business units that create, share, and apply knowledge within and across the boundaries of the entire company. Having communities of practice is one way to create true knowledge sharing in organizations (Wenger, McDermott, & Snyder, 2002).

Communities of practice help cultivate human imagination and organize knowledge to address problems facing organizations. They can be used to influence company strategy, breed new business opportunities, transfer best practices, connect personal development to company goals, and recruit and retain highly talented personnel. Communities of practice are beneficial for companies' long term success, as well as the success of individuals who work in them. (Wenger, McDermott, & Snyder, 2002).

Support for the importance of organizational learning in schools grew in the late 90's (Leithwood, Leonard, & Sharratt, 1998). In a school setting, organizational learning is referred to as the way the whole school staff learns collaboratively and applies learning on a continuous basis (Silins, Mulford, & Zarins, 1999). Consequently, in a learning organization, learning becomes the responsibility of individuals, teams, and the organization itself. Fullan (2001) confirms that there is a need, or responsibility for "knowledge building, knowledge sharing, knowledge creation, and knowledge management" in schools (p. 77).

Researchers are exploring models from management and organizational psychology as a preliminary framework for examining school effectiveness and have found that components of a school organization can be evaluated utilizing management and organizational models (Griffith, 2003). Other researchers have developed Path Model predictors of organizational learning in an effort to better understand how schools might become more successful organizations by engaging in organizational learning (Silins, Mulford, & Zarins, 1999).

Organizational learning is understood to be prompted by a need or a problem that leads to a collective search to a solution (Leithwood, Leonard, & Sharratt, 1998). According to Honig (2004), organizational learning must occur intentionally within organizations as new information is required and used. With many struggling schools, organizational learning might be a new avenue to explore to better understand how knowledge enters the system, is disseminated, and finally supports practice. Educators can begin measuring processes in place at school sites to determine the effectiveness of them in supporting progress toward desired school goals (Griffith, 2003). Honig (2004)

further states that, “Opportunities for organizational-environmental interactions over time facilitate the ongoing exchange of information at the heart of organizational learning” (P. 534). Little is known about these knowledge and information exchange processes in schools, presenting an area ready for further investigation.

Organizational learning in schools would incorporate the effective collaboration between the members of the organization and results in improved teaching and learning (Marzano, Waters, & McNulty, 2005). Ash and Persal (2000) suggest that time spent on effective collaboration is equally important to the time spent in the classroom teaching. Schools have to provide more than the space for teachers to teach, they have to organize the human, technical and social resources into an effective collective enterprise (Newman & Wehlage, 1995).

In many school settings, communities of practice have evolved into professional learning communities. Professional learning communities are being created as a way to address how to turn what we already know into action (DuFour, DuFour, Eaker, & Many, 2006; Fullan, 2006; Schmoker, 2004). The core of a learning community is centered on a commitment to each child’s learning. Members of a professional learning community recognize that they must work interdependently to accomplish the goal of educating every student (DuFour, DuFour, Eaker, & Many, 2006). Professional learning communities are one way of building cultures based on organizational learning.

Many researchers have sought to understand the contributing factors to team effectiveness in an effort to uncover solutions that will support success in organizations (Kozlowski & Bell, 2003). District staffs, principals, and teachers must grow and utilize social capital to maximize organizational learning. This work suggests that optimal

organizational learning requires having access to research-based practices to facilitate decision making. Therefore systems in schools that effectively and efficiently encourage reciprocation in the dissemination of information and knowledge are desirable (Daly & Finnigan, 2008). This process involves vertical and lateral capacity building. This networking system needs to have tight connections with critical people in the right places (Tsai, 2001). Organizational learning involves social interactions, therefore understanding social exchanges are important.

Networks for Promoting Organizational Learning in Schools

Research findings indicate that in order for organizational learning to occur, a strong system must be in place to help streamline the flow of information, especially of effective research evidence strategies for school reform (Daly, 2008). Developing effective social networks may be an important feature to explore in promoting organizational learning (Balkundi & Kilduff, 2005). Social networks are relationships or ties between people that help to improve an organization's output. These social ties assist in distributing and building knowledge. This facilitation and transfer impacts the dissemination of research evidence in schools. Therefore, particular attention should be paid to the way relationships that affect information-seeking behaviors are built and maintained. Researchers conclude that networks can either contribute to or hinder team effectiveness (Ahuja, 2000; Borgatti & Cross, 2003).

In searching for a way networks can play a role in how people learn with and from each other, it may be of value to take a closer look at the efficiency and effectiveness of a school's networking system, by using social network analysis to help analyze the flow of information between the members in schools and districts. A social

network is defined as the connections between people, and the resulting interactions. In organizations such as schools, connections or ties between different group members form networks, and are important in the facilitation of communication and transfer of knowledge. Social network analysis is one method for measuring or tracking information routes.

There are two central concepts that can be tied to social networks, structure and content of the connection between social groups, better known as dyadic ties (Balkundi & Harrison, 2008). The structure is what defines the purpose of the network, and it is associated with supporting the transfer of resources among individuals (Daly & Finnigan 2009; Coburn & Russell, 2008; Penuel, Frank, & Krause, 2007). The content is the information being disseminated between the dyadic ties or groups, related to the purpose of the organization. Research concludes that both strong and weak ties, or connections, are important in sharing information (Borgatti & Cross, 2003; Burt, 2000; Granovetter, 1973).

It is these connections or relationships that can facilitate sharing and acquiring information within and between the individuals in an organization (Balkundi & Kilduff, 2005). Not all relationships or connections between the individuals of the organization are the same. The type of ties in an organization can determine the flow of information between the individuals. According to Hansen (1999) strong ties play an important role in transferring tacit, complex knowledge between individuals. Strong ties are present when information is shared between individuals from one group to other individuals in a different group. This type of tie helps bridge and bond groups for effective sharing of

information (Burt, 2000). These ties are important to understand both at the school level, and at the district level.

Research suggests that strong ties or tight ties are more likely to be evident in effective schools. Members in a network system with strong ties are provided information through an efficient structure for sharing throughout the district. School staff members who have access to information and other connections are better able to acquire new learning. Schools that have structures or networks designed for consistent, on-going collaboration are utilizing strong networks with strong ties (Childress, Elmore, & Grossman, 2006; Daly, 2008). Organizations that have strong ties are able to sustain successful reform efforts towards desired change (McGrath & Krackhardt, 2003; Tenkasi & Chesmore, 2003).

Weak ties or structural holes, on the other hand, may present difficulty in the exchange of resources (Balkundi & Harrison, 2008 in press). When people are not connected, information does not always reach every member. Critical learning or information could be missed, and therefore obstruct efforts to improve the organization. Weak ties can hinder learning if people are not connected and only rely on their individual learning, without benefiting from their social capital. Teachers that do not work collaboratively, and only work in isolation, miss out on the ability to gain broader knowledge from exposure to peers' thinking (DuFour, DuFour, Eaker, & Many, 2006)

Weak ties, however, are not necessarily a negative or a disadvantage and can be instrumental in the diffusion of ideas (Granovetter, 1982). Weak ties can also refer to connections in which individuals or groups have contacts with a diverse range of disconnected others (Granovetter, 1973). The weak ties provide a wide base of

information sharing that allows for accessing many perspectives. Therefore, weak ties can assist teachers, for example, in accessing information from sources other than school personnel, which may include from individuals in other schools, or a districts' central office. Weak ties allow site personnel to keep informed on the most current best practices that can be disseminated through the strong ties within the school (Morris, Chrispeels, & Burke, 2003). Therefore, these two types of ties are important and relate to the context of the information to be shared. A network needs to include both strong and weak connections for optimal communication and transfer of information. Both strong and weak ties increase and improve the quality of staff development at a site (Daly, 2008). Schools and districts possessing quality networks could streamline learning as referred to in Huber's four stages of organizational learning: acquiring new learning, sharing the new learning throughout the organization, interpreting the new learning, and storing the learning in the organization's memory (Huber, 1991).

Another helpful aspect of effective networks is that they have key players in the right positions. For strong and weak ties to develop, individuals and groups need to have trust in the actors who share information. An effective network has key people at the center of the network to disseminate accurate information efficiently (Daly, 2008). It would be beneficial for schools to design quality networks, with strategic personnel in central positions, to efficiently keep the flow of information coming and going to the right people. At a school site, the principal, academic coaches and lead teachers are central to knowledge transfer occurring. For collaboration purposes, especially in corrective action schools, key personnel need to have the trust of staff to be effective. When leaders understand the structures of social networks - once they understand the

frequency and interaction patterns of communication and knowledge transfer between individuals and groups - they may be better able to meet organizational goals (Ahuja, 2000; Tsai & Ghoshal, 1998).

In learning how members of an organization interact and how these interactions can contribute to or hinder success in achieving the goals in the organization, it is important to consider how effectively their network is working. Social Network Analysis is a method used to assess how well the network is meeting desired goals (Haythornthwaite, 1996). Researchers are beginning to recognize the value of using this tool to assess the quality and frequency of information sharing interactions in districts and schools (Daly, 2008). There is a need for more empirical research in this area.

There are very few examples of studies examining schools using SNA to measure the effectiveness of their networking systems. One critical study (Daly, 2008) was conducted in an educational setting using SNA to assess the quality of a district's network system for communication and transfer of knowledge. The study involved schools in a district under the "Program Improvement" status as a result of the NCLB legislation. The results indicated that the district, made up of schools, did not have an effective networking system. There were sparse ties among the schools in this district and a centralized network structure that inhibited exchange of complex information, which interfered with change efforts. The school blocked outside sources of information completely. There was no causal relationship drawn in this study, but the lack of a tight network may have contributed to their "Program Improvement" designation.

In addressing reform efforts, researchers are beginning to study the relationship between organizational learning and the diffusion of new learning throughout the

organization (Fullan, 2005). When discussing organizational learning, there is usually not a focus on the content of what is being learned and diffused (Smith, 2003). In addition to understanding the concepts in organizational learning and social network theories in school improvement, there is a renewed interest on the part of researchers in the importance of using RE to improve teaching and learning. Studying what an organization may draw on in solving problems and accessing solutions may support schools in filling the knowing-doing gap that challenges schools today (Nutley et al, 2003).

Research Evidence

The NCLB law makes approximately 110 references to the use of RE in its document (Smith, 2003). However, there does not appear to be a common definition or understanding of the term research-based evidence among educators. Scientifically-based evidence has been referred to as research-based practice, scientifically based evidence, research-based education, evidence-based decision making, evidence-into-practice, research evidence, and data-driven instruction (Nutley, Walter, & Davies, 2003; Coburn, Toure, & Yamashita, in press; Honig & Coburn, 2008; Tseng, n.d.). All the terms refer to local decision making. Others use the term evidence in more limited ways, such as, the policy demands on school district offices that lead to various forms of evidence (Honig & Coburn, 2008).

In the NCLB Act (2002) Congress (subpart 37 of section 9101) defines scientifically based research as, “studies that test random samples of the population and involve a control group that are scientifically controlled.” It is also defined as, “including experimental or quasi-experimental studies, with a preference for randomized controlled

trials.” Scientifically-based research is ranked by the quality or levels of evidence: randomized trial, quasi-experimental, correlational studies with statistical controls, correlational studies without statistical controls; and case studies (Smith, 2003). Simply put, an instructional program or practice is grounded in scientifically-based research if there is reliable evidence that the program works. It is not the intention of this study or literature review to arrive at a definitive definition of scientifically-based research. This study has unitized the term research evidence throughout for consistency. The term RE encompasses the various definitions by researchers and practitioners.

Although there appears to be controversy about the kinds of research that should be conducted in education (qualitative or quantitative), some believe that empirical research such as those studies conducted in the field of medicine, for example, are also necessary in education (Slavin, 2002). Davis (1999) suggests that educational research should be able to meet the criteria of scientific validity, be practical, and be relevant for the context in which it is applied. He purports that RE in education operates at two levels. The first level involves utilizing existing evidence from worldwide research and literature. The second level involves establishing sound evidence where existing evidence is lacking or of questionable, uncertain or weak nature. He further suggests that research evidence, once appraised for relevance to the context, should be combined with professional judgment and expertise.

Practitioners’ work on RE has come from various fields, such as healthcare, social care, and the criminal justice system, as well as education (Nutley et al., 2003). For example, Kittson, Harvey, and McCormack (1998) conducted research in the medical field and concluded that successful implementation of research into practice is a function

of the interplay between three core elements - the level and nature of the evidence, the context or environment into which the research is to be placed, and the method or way in which the process is facilitated. The authors offered a conceptual framework for the importance of a balance in the three core elements (Kitson et al, 1998).

The framework emerged from the following equation: $SI=f(E, C, F)$, where SI=successful implementation, E=evidence, C=context, F=facilitation and f=function of. In their framework evidence is defined as the combination of research, clinical expertise, and patient choice. Context is defined as the environment or setting in which the proposed change is to be implemented. The context is subdivided into three core elements: prevailing culture, nature of the human relationships, and organization's approach to routine monitoring of systems and services-measurement. Facilitation is defined as a technique by which one person makes things easier for others. Facilitation is the type of support required to help people change their attitudes, habits, skills, ways of thinking, and working.

Kitson, et al. conducted four case studies in nursing facilities to test the framework on high and low combinations of the quality of the evidence, context, and facilitation. Results indicated that all three factors need to be high for maximum use of research evidence in practice. In education, facilitation might be akin to assistance from the district personnel or staff developers. The authors concluded that facilitation is a feature overlooked in the importance of cultural change in adopting research-based evidence into daily practice.

In education, a recent study (Nelson, Leffler, & Hansen, 2009) set out to investigate how RE is defined by practitioners and policy makers, and how and under

what conditions practitioners and policy makers used RE. The study revealed that practitioners and policymakers “did not draw a distinction between evidence based on empirical findings and ‘research findings’ derived from the media, popular professional journals, the experiences of others, gut instinct, and their personal experience.” (p. 51). The recent attention on the development of policy and practice based on evidence has challenged educators with the dilemma of how to devise effective strategies for integrating evidence into policy and practice. Nutley, Walter, and Davies (2003) have designed a framework consisting of six main interrelated concerns as a guide to looking at policy into practice. The implementation of research evidence necessitates an understanding of the problem or set of problems interfering with student achievement. It also requires the knowledge of strategies or policies to remediate the problems. This knowledge implies that the practitioners involved understand or know why they are selecting specific strategies to address the issues related to poor progress in learning (Davis, 1999).

Nutley, et al. (2003) call this type of knowledge the “know-about,” “know- what,” “know-how,” “know-who” and “know-why” of RE use. Currently, educators appear to emphasize the “know-what” part of research evidence implementation and do not seem to address the other critical features important to knowledge integration. The authors suggest there is a knowing-doing gap in the use of RE in school settings.

Research evidence can be used in many different ways. However, there does appear to be a need to bridge the gap between the worlds of researchers and practitioners in order for RE to be used in the most effective way. Nutley and Davies (2008) describe three ways in which research is used. Research is used *instrumentally* when it brings

about change in behavior and practice. It is used directly in decision making or changes in behaviors. This is akin to first order change suggested by Marzano, Waters, and McNutlty's (2005) research on the stages of change. Evidence can also be used *conceptually* when it brings about change in levels of knowledge, understanding, and attitudes. The evidence shapes how individuals think about problems and solutions. Conceptual use involves second order change (Marzano et al.2005) affecting belief system thinking. Research evidence can also be used *tactically* when the evidence is used to justify reform efforts.

To fill the gap between researchers and practitioners' understanding of research evidence use in daily practice may involve a blending of concepts from the "research into practice" and "research in practice" models. This requires the balance of evidence seen in the "research into practice" being external to the world of practitioners, held in the confines of the proverbial Ivy Towers, and the evidence seen in "research in practice" which is acquired through the generation of professional practice and experience (Nelson, Leffler, & Hansen, 2009). In order for this to be achieved, evidence cannot be separated from the social context. Educational researchers and practitioners need to understand the social construction of knowledge and how this requires the involvement of practitioners in the change (Nulley et at. 2003; Spillane, Reiser, & Reimer, 2002; Davies, 1999). There needs to be a balance between replication and innovation. This requires balancing research knowledge with context knowledge (Nutley, et. al, 2003).

The research relevant to the implementation of research evidence suggests that adopting a practitioner-as-learner lens may assist policy researchers in understanding how individuals interact with and shape policies (Nutley et al., 2003). Researchers claim that

districts are continually searching for information from a variety of sources. In current times, one of the challenging issues in seeking evidence is the overwhelming amount of evidence available for districts/schools to sort through and interpret. In the search process many district personnel tend to limit the range of evidence due to time and attention constraints (Honig, 2003). The search is often narrowed with a tendency to search for and pay attention to evidence that resembles what the districts already know and expect to find (Hannaway, 1989; Spillane, 2000)

When a district selects certain pieces of evidence, it then engages in a process in which it decides whether to use the evidence and if so how to use the information. This process is referred to as sense-making or interpretation (Spillane, Reiser, & Reimer, 2002). In the sense-making process, individuals interpret the evidence and construct an understanding of the meaning and implications of the evidence. They make sense of this understanding and interpretation by fitting the new information into their pre-existing cognitive frameworks or working knowledge (Kennedy, 1982a).

The use of research evidence in practice does not happen in a linear way where researchers convey their findings to practitioners and they, in turn, apply it effectively to improving teaching and learning. It is a complex process that is more social and interactive (Balkundi & Harrison, 2008) The work on sense-making, using a practitioner-as-learner-lens, suggests that policy researchers frame a problem based on root causes, select evidence from the abundance of available sources, and balance prior knowledge and experience on the construction of meaning (Weick, 1995; Spillane, Reiser, & Reimer, 2002). This process of transferring research into practice occurs in a multi-dimensional way. District personnel must be able to disseminate the information throughout the

organization and the information must be applied in meaningful ways to the context of each school in the organization for effective reform to occur. Currently there is little research on the impact of social processes on research use and understanding (Nutley & Davies, 2008).

Cultural Overlays

In addition to the limited literature and empirical research on RE, the complex social and interactive processes involved in selecting the right research evidence in district/school reform, and the districts/schools' ability to successfully share the research evidence throughout the system, there may be another contributing factor to the lack of effective use of evidence in districts and schools. The resistance to creating a culture of change may be hindering practitioners in the implementation of RE. For example, in a case study of five low-performing urban high schools conducted by Lachat and Smith (2005), it was concluded that one of the barriers for utilizing data to inform practice was cultural resistance.

This cultural resistance is not only occurring at the individual schools sites, but at the district office level as well. Corcoran, Fuhrman, & Belcher (2001) examined the roles of central office staff in shaping and supporting instructional reform in three large urban districts, and found that although leaders wanted to build research evidence based cultures, district and staff members were not willing to put aside old patterns of decision making and look at effects of evidence decisions.

Although cultural change has not been found to be the only hindering factor for schools and districts when it came to utilizing RE or data to drive instructional practice, it appears that the cultural challenges are a prominent factor in reform efforts. In a study

conducted in nine designated Continuous Improvement high schools with diverse settings, Ingram, Louis, and Schroeder (2004) set out to assess the relationship between school culture and implementation of Continuous Improvement practices. In particular, the focus of the study was to examine the levels of data-based decision making by the school staffs.

In their study (Louis, et. al, 2004), the authors found that besides technical and political challenges, there were also cultural challenges that hindered the implementation of data-based decision making at the school sites. Some of these cultural challenges included: teachers relying on their own methods for judging their ability to teach as opposed to external measures; the staff basing instructional decisions on experience and intuition instead of data; and teachers not relying on data. They also did not see a correlation between their instructional practice and student academic outcomes. In these schools' cultures, the teachers did not embrace the idea or concept of using research to influence their practice (Davis, 1999).

The research on cultural resistance relating to the lack of use of research evidence in practice aligns with the Kitson's et al, research findings in the nursing field. They concluded that in order for RE to be used in practice, all three factors of quality evidence, context, and facilitation need to be present. Facilitation implies that the personnel would be available to make things easier for staff to take on RE into practice. This type of support is required in order to help people change their attitudes, habits, skills, ways of thinking, and working. These concepts are in agreement with other researchers' findings on how RE should be implemented (Nutley & Davis, 2008). This kind of RE in practice is conceptual and tactical because it brings about change in levels of knowledge,

understanding, and attitudes and can be used to justify reform efforts (McGrath & Krackhardt, 2003; Tenkasi & Chesmore, 2003).

Summary

The literature reveals that the lack of “culture of change” in schools and districts may be hindering growth and progress in our school system (Davies, 1999; Corcoran, Fuhrman, & Belcher, 2001). This review of the literature suggests that there needs to be a systematic, organizational learning approach to how knowledge is accessed and disseminated by staff members at the various levels in schools and school districts. Practitioners in education need to develop a system in which the entire organization engages in learning how to access and implement new practices using relevant, valid research evidence for new learning to penetrate the entire organization. District staff could play an important role in the facilitation and dissemination of quality RE into practice at school sites. Districts and schools would benefit from the development of a systematic process for facilitating the sharing of new knowledge within and throughout the entire organization (Kitson, Harvey, & Mc.Cormack, 1998).

Research in education on the use of research evidence in daily practice is in the early stages of development. Researchers are beginning to explore the use RE in reform efforts (Coburn, Honig, & Stein, in press; Daly & Finniga, 2009). Their findings are indicating that the use of quality RE may be an integral part of a school’s ability to improve student achievement, and for those schools in “Program Improvement” and “corrective action” status, may increase the possibility of exiting the sanction (Ingram, Louis, & Schroeder, 2004). Research further suggests that there is a need to investigate

the processes districts and schools use to diagnose problems in achievement, and select quality research evidence to remediate these problems (Daly & Finnigan, 2009).

In order to use RE effectively in reform efforts, research results are indicating that the use of RE to improve teaching and learning needs to occur at an organizational level (Honig, 200; Daly 2008). Researchers are exploring concepts in organizational learning theory that support the flow of innovation and knowledge within schools and throughout the entire organization. Learning involves social interactions and the sharing of new learning needs to occur throughout an organization (Bryk & Schneider, 2002). This implies the need for strong social networks.

The process of identifying the problem affecting student achievement, and implementing effective RE needs to occur not only as regular practice, but it must occur at an organizational level (Kitson, Harvey, & McCormack, 1999). Research indicates that the use of RE as a regular practice may not be occurring in many schools when planning for improvement (Coburn, Honig, & Stein in press). Not only are educators not using RE in a consistent manner, many educators do not appear to have a common understanding of the term (Honig, M. I., & Coburn) This lack of understanding of RE and lack of systematic use of it may be a missing feature in school reform and may be hindering schools' ability to exit the "Program Improvement" status.

Gaps in Literature

There appear to be some gaps in the literature when investigating use of research evidence in school reform. There is limited research on how schools and districts define, acquire, use, and diffuse research evidence into daily practice. There is a need to

examine the processes districts and schools use to diagnose problems interfering with their students' achievement, and how they select RE to solve their identified problems.

Another gap in research is related to studies being conducted in "Program Improvement" schools. Many more schools are being labeled as a result of not meeting NCLB requirements. To date, there has been little research conducted in these schools, especially those in the corrective action phase. Research could be valuable in assessing whether using quality RE helps schools in corrective action exit this status.

A final area where there appears to be a gap in the literature is in the convergence of organizational learning theory and social network theory in relation to the use of RE in reform efforts. Further research into how RE is defined, acquired, and used at an organizational level and how it is diffused throughout the organization may be a beneficial exploration in improvement endeavors.

The above mentioned gaps may point to inherent features in effective schools. They may be the critical attributes missing in schools not meeting NCLB goals. There is a need for further research in these areas to explore whether they contribute to improving schools, especially those in PI status.

Conclusions

There is a collective effort being made by educators, and researcher alike, to help find solutions to our nation's increasing problems in public education. Many are trying to find out what makes some schools successful. Researchers are beginning to look at the role organizational learning plays in school reform. This kind of learning involves social interaction, a key component of organizational learning theory. Researchers are also starting to examine the role research evidence plays in school reform. Quality research

evidence needs to be used throughout the entire system. In addition to having common understandings of how to define, acquire and use RE effectively, schools would need to know how to disseminate innovations, knowledge, and communication throughout the organization. Ties between school site members and district personnel may increase access to resources and information, as well as opportunities to learn research practices for implementation in the classroom. Effective and efficient social networks may be required. There is little empirical research to date addressing these issues in school reform.

Figure 2.1 below displays the concept of examining organizational learning and social networks for the purpose of developing a better understanding of how research evidence is and can be implemented in school improvement efforts.

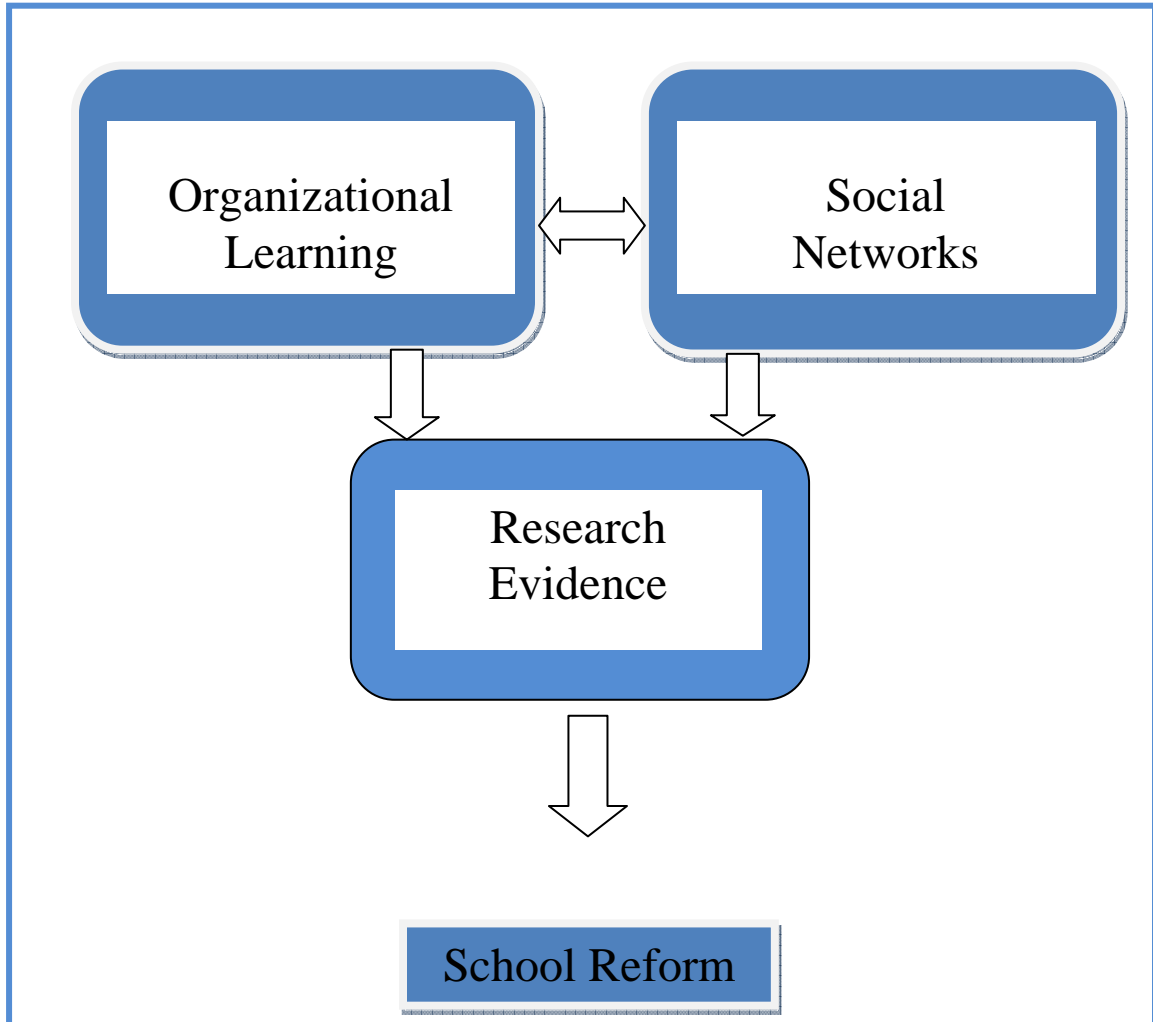


Figure 2.1. Theoretical Frameworks

Chapter three describes the method design and methods that were utilized to collect and analyze the data to explore the research questions in the study.

CHAPTER 3

Methodology

Method Design

For this study, a comparative case study design was used to explore three areas of inquiry in two high schools that were in the corrective action phase of NCLB (a) the processes that schools in corrective action used to diagnose problems and identify solutions, (b) how the schools in corrective action defined, acquired, used, and diffused research evidence, and (c) in what ways and to what extent information, knowledge, and innovation were diffused throughout the corrective action schools through social networks. A case study approach was selected because the nature of the phenomenon had a level of complexity that required multiple methods and data sources in order to gain an in-depth understanding of the participants in their natural settings (Yin, 2002). A case study design was an appropriate approach when there is an intensive effort to understand a single unit of study within a complex context.

Connection to larger study

This study was part of a larger longitudinal comparative case study consisting of two phases and spanning a three-year period. The larger longitudinal study was investigating the degree to which corrective action schools, defined by NCLB, diagnosed problems, defined solutions, and acquired and used research evidence in the process. It also addressed how the flow of resources within and between schools and district office supported or constrained improvement efforts. The main purpose of the larger longitudinal study was to gain insight into the improvement process of schools in corrective action and to contribute to educational reform efforts. This study utilized

selected extant data (survey and social network analysis data) gathered from the larger longitudinal study. The design of the larger study and this study was to mutually inform one another.

Context and Participants

Selection of district

This is a case study of two high schools in corrective action in a large urban district. According to Merriam (1998) the suitable method for selecting sampling for qualitative research is the non-probability sampling method. The most common form of non-probability sampling method is referred to as purposeful sampling, which emphasizes selecting only information-rich cases which can add a great deal of learning about issues of central importance (Patton, 1990). Using the purposeful sampling procedures, the investigator endeavored to discover, understand, and gain insight around the issues of central importance and therefore selected a sample that provided rich learning opportunities (Merriam, 1998). The school district provided this rich context from which to investigate the research questions and was also part of the larger, longitudinal study described above.

The school district is one of the largest school districts in California. It has a diverse student population serving approximately 133,000 students. At the time of this study, the demographic data for students consisted of 44% Latino, 25% White, 13% African American, 9% Asian, and 7% Filipino students. Sixty-three percent of the students received free and reduced lunch, classifying them as socio-economically disadvantaged, and 15% were identified as student with disabilities. Twenty-two percent of the student population was identified as English Language Learners, with Spanish being the

prominent language spoken. Of the districts' 250 schools, 54 schools were in program improvement with 23 in the restructuring phase, and 14 in corrective action. Schools in the corrective action and restructuring phases had significantly higher percentages of non-white students from lower socio-economic backgrounds.

Selection of schools

A comparative case study selection is defined by Miles and Huberman (1994) as selecting individuals, sites, and groups with the same relevant characteristics over time. Using this type of selection procedure was appropriate in the district because it had 14 schools in corrective action, which displayed similar characteristics over time. The case study focused on two high schools in corrective action in district. Both high schools in this study were of similar size and demographics, and both were in year four of corrective action status.

One of the high schools in this study was called School A. This school served 354 students. The student population consisted of 87.0% Hispanics, 7.1% African American, 2.5% White, 1.1% Filipino, and 2.3% other. The Total population at School A was 354. Seventy-four percent were English learners, and 97% of the students were socio-economically disadvantaged. This high school was in year four of corrective action and the Academic Performance Index (API) ranking in 2008-2009 was 1 statewide and 1 compared to similar schools.

The second low performing high school in this study was School B. This school's demographics were very similar to the first school: 77.2 percent Hispanic, 11.3% African American, White 9.9%, 1.2 Filipino, and 0.4% other. The total population for this school was approximately 487. The English learner population was 35%, and 93% of the

students were socio-economically disadvantaged. The schools' API ranking in 2008-2009 was a 1 statewide and a 1 compared to similar schools. This school was also in corrective action status year four.

Selection of participants

Select personnel from the sites and district were chosen to participate in interviews. Ten personnel from each of the in-depth case studies of the corrective action schools were interviewed totaling 20 staff members, including the principals. In order to increase reliability, stratified purposeful sampling techniques were used (Miles and Huberman, 1994). Teachers were selected based on principal input, and on formal and informal leadership position held on campus. Each site had an instructional leadership team, with approximately 10 people on the team representing the various subject areas on campus including the principals. Interviewing 10 staff members from each site represented a third of the personnel on campus. The purposeful selection sampling technique was utilized so that the participants would reflect representation of specific groups, thus capturing the range of responses in the different domains being measured.

Three interviews of district personnel who were mostly responsible for improvement of schools were conducted. These interviews included the Superintendent, and two High School Improvement Officers (SIO). This intentional or purposeful selection sampling technique was utilized to ascertain the districts' understanding of organizational learning, RE, and social networks as compared to sites personnel's' understandings. A total of 23 interviews were conducted, transcribed, and analyzed.

Data Collection

The data collection for this case study involved interviews, document reviews and relevant extant survey data at each school site and the district office. Refer to Table 3.1 below for a summary of the research questions, methods, and analysis.

Qualitative data

Document review

Improvement plans, report cards, annual reports, and district level documents such as district accountability reports, and improvement plans were analyzed. Also reviewed were documents the schools used to develop school-wide reform strategies focused on exiting corrective action status. A document review protocol (Appendix B), designed by the larger project and modified for this study, was used as a guide for collecting data on how the organization identified problems and solutions, selected strategies for improvement, and how schools defined and used research evidence, as well as how this information was diffused through the schools and from the district's central office through networks.

Each document was analyzed for key elements and the findings triangulated with interview and survey data collected. The document review was important to corroborate and augment evidence from other sources (Yin, 2003), in this case the alignment of espoused theory and theories in use (Argyris & Schon, 1978) in improvement efforts. Content analysis was used as the systematic procedure for describing the content of the relevant documents collected (Merriam, 1998).

Interviews

Ten interviews were conducted with administrators and staff members at each of the two high schools in corrective action. These interviews, in addition to data review and extant data, provided additional information on the process used for determining problems, selecting strategies, and defining, acquiring, and using research evidence throughout the system. A staff meeting was conducted to provide an overview of the intent of the study and to provide the staff with an opportunity to ask questions. The staff members were selected using a purposeful selection technique (Miles & Huberman, 1994). The staff members were contacted individually and asked if they were willing to participate. Personnel were interviewed using a semi-structured interview guide focused on ascertaining their perspective on the process described above (Appendix A). The semi-structured interview guide (Patton, 1990) drew on the concepts of organizational learning, social networks, and research evidence. The purpose of the interview was to see how personnel identified problems, how they arrived at possible solutions, and the degree to which related evidence was obtained and used within the school. These interviews also informed how individuals at these schools defined evidence that they used to improve student achievement, and judge the depth to which research evidence was used when applied to the identified problem. The information gathered reflected whether the evidence used was on a surface level or if it was aligned to address the solution to the identified problem.

The interviews also helped reveal the social network structures used to help or hinder the flow the information and innovation between the schools and district. Interview questions addressed how networks are developed, what kinds of resources

flowed through the network, and why certain types of resources flowed within and between schools and the district office. The interviews also assessed if other external networks were used within the system for staff to acquire knowledge and innovation.

The school staff selected included members involved in school site decision making teams. The interviews took approximately an hour, and were audio recorded and transcribed verbatim (Appendix D). The interviews consisted of several questions related to personal background, identification of problems/causes, development of improvement plans, definition, acquisition, use, and diffusion of research evidence, and social networks. The interviews were voluntary, confidential, and held to the IRB standards (Appendix C). Interview questions were previously piloted with staff from corrective action schools not involved in the study and were revised and refined after consultation with the dissertation chair.

Three district central office personnel charged with school improvement responsibilities were interviewed using the same semi-structured interview protocol. These interviews yielded information about how personnel in high district positions perceived the organizational learning, use of research evidence, and how the social network structures operated in service of corrective action high schools. These district staff members were the Superintendent and the two High School Improvement Officers that worked or had previously worked closely with the schools. The entire interview data was triangulated with the document review and extant data, as was discussed in the following section.

Quantitative data

Extant data: social network data

The quantitative data for this proposed study was taken from surveys conducted in the larger, longitudinal study (Daly & Finnigan, 2009), and conducted by the longitudinal team with school and district staff on social networks. The purpose of the survey was to gather information on how people are connected to one another and how they shared resources. It helped assess the way in which new ideas entered the schools, relative to how problems were diagnosed, solutions were selected, how research evidence was accessed and used, and whether the information exchange supported or hindered or was neutral for organizational learning. The data provided insight into whether the schools and district searched for new ideas from outside sources, or depended on internal knowledge, and the ways in which research evidence was defined, acquired, used, and diffused to make decisions in reform efforts.

The social network analysis data was important for understanding knowledge transfer and discrimination information. The social network data revealed how people were connected to one another, and how they shared resources throughout the organization. The social network analysis measures informed this study on the structure, frequency, and strengths of the interactions among schools and district personnel around the exchange of information and knowledge, and the qualitative data revealed information on the actual content and context of these interactions.

Data Analysis

This study utilized a variety of measures for analyzing the data collected.

Qualitative data analysis

The process of qualitative data analysis involved preparing the data for analysis by going from the particular, detailed data to the general codes and themes in order to

understand the larger, consolidated picture (Creswell, 2008). In qualitative research, data collection and data analysis are iterative activities since previously collected data was constantly compared to other data. The researcher was continually recycling the data in looking for major ideas. Reading and rereading qualitative data helped to develop a deeper understanding of the data collected from participants in an effort to understand the phenomenon studied (Creswell, 2008).

The analysis of qualitative data helped indicate the level of organizational learning occurring each site and, also helped assess the use of research evidence in the decision making process. This lens provided a focus on how well schools in corrective action defined, acquired, used, and disseminated research evidence. Each data source was examined in isolation for its own merits and then it was analyzed collectively to obtain the themes that emerged from all the sources.

Interviews

In order to determine answers to the research questions that guided the study, interviews were conducted with school staff and district personnel. An analysis of the transcripts helped develop a picture of the phenomenon of the organizational learning from the different perspective of the participants around social networks, and identification of research evidence. Using a constant comparative analysis approach assisted in making meaning of the data (Creswell, 2008; Merriam, 1998). Transcripts were explored for emergent patterns where trends were identified, coded, and linked to representative quotes. Noted relationships were compared in the case studies where common themes were established (Miles & Huberman, 1994).

Interviews were audio-recorded and transcribed. The interviews were then coded to identify themes. (Miles & Huberman, 1994, p. 92). The first cut of the interview data analysis elicited codes which allowed for important themes to emerge. These themes emerged out of the data rather than being predetermined prior to data collection and analysis (Patton, 1990). The research questions guided the development of the codes and themes.

Miles and Huberman (1994) describe the process of coding as assigning codes, tags, or labels to units of meaning in descriptive data. Codes take the form of understandable category labels, and are attached to words, phrases, sentences, or paragraphs that are connected to a specific concept. The important part of the connection with the identified codes was the meaning of the underlying words or phrases. Codes assisted the researcher in pulling together cluster segments relating to specific questions or themes. Clustering the sets allowed for drawing conclusions in the analysis of data (Huberman, 1994).

The next cut included utilizing a constant analysis method (Boeije, 2002; Glasser & Strauss, 1967). This method involved checking and rechecking emerging themes (Miles & Huberman 1994). This process of recursive analysis led to both descriptive and explanatory categories and provided a deeper understanding of the data (Lincoln & Guba, 1985). The emerging themes were constantly examined through the lens of organizational learning, and social network theory. After several cuts, essential themes were determined that best reflected the findings of the study.

Document review

Document review analysis, in conjunction with interview and survey data, was part of the content analysis conducted using a thematic approach (Trochim, 2001) to detect patterns. The researcher analyzed the documents collected using the existing protocol to analyze ideas around research evidence and social networks. This helped identify significant themes and regularities, dissimilarities, and patterns that resulted in propositions to consider for the research questions leading this study (Miles & Huberman, 1994).

In qualitative research triangulation is used for corroborating evidence from different individuals, types of data, or methods of data collection. The process was used to confirm descriptions and themes discovered from the different sources of data collected (Creswell, 2008). Triangulation reduced the risk of drawing conclusions that reflected systematic biases or limitations as a result of using only one source of method in data analysis. By using multiple sources a researcher can confidently share understandings on the conclusions addressing questions researched minimizing the threat to validity (Maxwell, 2005). To further strengthen the reliability as well as the validity of the study Yin (2003) suggest that converging lines of inquiry ensure that similar patterns and categories exist in the data analyzed. In this research study data was collected from multiple sources, and analyzed using a variety of techniques.

Quantitative data

The quantitative data collection and analysis was drawn from the larger, longitudinal study described previously in this study. The data completed a

comprehensive picture of the phenomenon studied and complemented the qualitative data collected and analyzed.

Extant data: social network analysis

The extant data analysis was obtained from the longitudinal study. The five distinct networks of information, trust, innovation, knowledge, and communication were examined in order to understand informal networks in the corrective action schools and at the district level.

Density measures were used to determine the frequent ties within each of the networks to help measure the connectedness in a network. This was important for organizational learning because it promoted social capital which is necessary for new learning to occur throughout an organization such as a school setting. Dense networks have tight ties and can move resources more quickly than networks with less dense ties (Scott, 2000). This process can assist with effective exploitation and exploration for innovation of ideas and new learning to occur.

Closure measures the relationships between people in a network, including cliques. Organizations with high levels of close relationships often have a higher level of organizational learning and performance (Ahuja, 2000; Tsai & Ghoshal). Closure in organizational learning can facilitate shared language for learning, common understandings of goals and curricular demands, and the ability for people to feel confident in supporting each other's development. This can reinforce the progress needed for successful single loop and double loop learning in problem identification in developing solution in reform efforts (Argyris & Schon, 1978).

Centrality is another measure of the relationships in a network. People who have central positions in a network have increased access to resources and the ability to link and spread social capital throughout the organization (Stuart, 1998; Tsai, 2000). This measure helped determine the existence of boundary spanners, individuals that bring inside or outside sources and facilitate connections. There was also be an analysis to determine the flow of information and whether it was from internal or external sources (Burt, 2000) enhancing the exploration and exploitation of new learning and innovation (March, 1991). Table 3.1 summarizes the research study

Table 3.1. Study Research Questions, Methods, and Analysis

Research Questions	Method	Analysis
1. What are the processes that corrective action schools use to diagnose problems and identify solutions?	<ul style="list-style-type: none"> • Interviews • Document and Artifact Review 	Constant Comparative Analysis Coding schema Content Analysis
2. How do schools in corrective action define, acquire, use, and diffuse research evidence?	<ul style="list-style-type: none"> • Interviews • Document and Artifact Review • Social Network Analysis (extant data) 	Correlations Constant Comparative Analysis Coding schema Content Analysis Network Measures— Density, Closure, Centrality
3. In what ways and to what extent is information, knowledge, and innovation diffused throughout the corrective action schools through social networks?	<ul style="list-style-type: none"> • Social Network Analysis (extant data) • Interviews • Document and Artifact Review • Student Demographic and Performance Data 	Network Measures— Density, Frequency, C/P Structure, Longitudinal Network Measures Constant Comparative Analysis Coding schema Content Analysis

Adapted from Daly & Finnigan 2009.

Researcher's Role and Ethical Considerations

As researcher, I needed to consider positionality because during the duration of this study I was an administrator in the district in which the study was conducted. Although I was an administrator in this district, this not did interfere with my objectivity in this study. I was an elementary school principal and by district design had very little contact with high school personnel. My positionality, however, allowed me easier access to district communications and contacts at the high schools. My positionality also provided me with insight of the nuances of the district, and knowledge of the structures in place. I took caution to avoid bias, and remained objective throughout this project.

All participants had the opportunity to remain anonymous and without threat to their current positions. All individual information remained confidential. The UCSD's IRB requirements were met by the researcher, and the stipulations of the process were followed throughout this study. The study involved only adult participants, and there was no anticipated risk of harm. The risks were considered minimal for negative affects to their emotional, psychological, physical, social, economical, or political well being. The participants were notified of the study's premise and procedures, and their participation was voluntary. They were informed that they could withdraw at any time during the study.

The interviews were conducted without using participants' names, only positions. To increase the probability of participation and receive adequate number of surveys, a professional development session was conducted at each site and for school district personnel addressing the concepts being studied before the survey was given out.

These meetings presented a rationale and clarified understanding of the purpose of the study. It also informed the participants of the benefits and value of being part of this study because it would help inform their next steps and future learning opportunities to influence and guide their reform efforts. During these sessions there was a general discussion of social networks survey questions, interview, and document review procedures and lasted about an hour. Study results will be shared with site and district office staff involved.

Limitations of the Study

The case study offered insight into the improvement process of schools in corrective action under NCLB. However, there were some limitations to the scope and generalizability of this study. They involved limited context and sample size, interim district leadership, and temporal concerns.

The first limitation addressed the limited context and sample size of the study. The study examined high schools in corrective action status in a large urban school district. The findings may not address all educational settings such as elementary and middle schools, rural settings, and small school districts. The processes used by the schools studied may not be generalizable to high performing schools or schools in different phases of the program improvement status or successfully exiting corrective action status. The sample population included high school and district personnel only, and a limited number of participants. The sample population was selected by a purposeful sampling procedure and participants may not have represented the entire school personnel or high school personnel from other settings.

Another possible limitation was the status of district personnel utilized in this case study. The district had an interim superintendent, deputy superintendent, and people in key leadership positions. The district had been in a state of flux in the last five years, i.e. four superintendents in the last five years. This inconsistency in leadership may affect site personnel's knowledge of district support, organizational learning structures, networks and flow of research evidence for best practices.

A final limitation for this study involved temporal issues. The data collection and analysis represent only a particular point in time. Schools in the study were undergoing constant accountability demands that may change year to year.

Given these limitations, it was critical to pay attention to the way data was collected, analyzed, and interpreted. In order to produce valid and reliable results there needed to be high levels of trustworthiness in the research process (Merriam, 1998). To ensure high levels of trustworthiness the researcher used multiple sources of evidence and established a chain of evidence (Yin, 2003) as outlined in the methods section of the study. To further promote trustworthiness in the study, careful triangulation of the data was conducted to report consistent findings.

CHAPTER 4

RESULTS

Through the analysis of the data, it was evident that these two high schools in corrective action had more in common than not. They both became small schools at the same time, both shared similar challenges as the two lowest performing schools on a common site, and each served a similar student population/demographics. As will be shown when analyzing the way in which both schools diagnosed problems and solutions in their organizations, there was no significant distinction between how the two schools operated. Therefore, the findings will be presented collectively unless there was a significance difference in schools' responses to any given topic.

Table 4.1 displays the participants their role at each of the schools. For confidentiality purposes, the schools will be referred to as School A and School B. The participants will be referred to by school and a number, as shown on the table below.

Table 4.1. Interview Study Participants. School A & B

School A Staff	Leadership Role	Gender	Years of Experience School/Total
1A. English Learner Support Provider	ILT	Female	1/20
2A. Social Science, Video Production, and Year Book Teacher	Union Rep.	Male	4/11
3A. Art, Graphic Design, and Government Teacher	ILT	female	4/4
4A. Language Arts for English 1-4 Block	Academic and Intervention Committees.	Male	4mo./4
4A. ESL Teacher	None	Female	20/20
5A. Earth Science and Algebra Teacher	None	Male	1/10
6A. School Counselor	ILT, Program Imp. Team, Leadership Team	Female	10/10
7A. US and World History	None	Male	5/12
8A. Resource Specialist	None	Male	3mo/6
10A. Principal	School Leader	Female	2/8
School B Staff			
1B. Spanish Teacher	ILT	Male	3/ 10
2B. Math Teacher	ILT	Male	5/8
3B. English, ESL Teacher	English Dept. Chair	Female	3/4
4B. Secondary Counselor	New Counselor	Female	1/2
5B. Marine Biology Teacher	Writes Grants for Dept.	Male	3/3
6B. Gr. Eng. Teacher	Key WASC Coordinator, Restructuring Committee, Intervention After School Program, ILT	Female	2/4
7B. PE Teacher	None	Female	1/1
8B. Science Teacher	Team Leader	Male	4/4
9B. Government Eco. World Hist. Teacher	ILT	Female	3/4
10B. Principal	School Leader	Female	2/4
Central Office Staff			
Superintendent	District Superintendent	Male	1/4
School Improvement Officer (SIO)		Male	2/3
School Improvement Officer (SIO)		Male	1/23

As shown on Table 4.1, the interviewed staff in corrective action school A had a work experience at the site ranging from 3 months to 20 years. Only two of the ten staff members interviewed were at the site since the adoption of the small school model in 2004. The total work experience of the interviewees at this school was 10.5 years. Three of these participants were members of the Instructional Leadership Team (ILT).

Table 4.1 also indicates that at School B the site work experience of the interviewees ranged from 1-5 years. This range indicates that none of the interviewed participants were at the school when it transitioned from a comprehensive high school to

a small school. The average for the total educational work experience at School B was 4.4 years. Four of the participants served on the ILT.

Quantitative Extant Data

Indicated on Table 4.2, participants for the survey included 21 teachers and paraprofessionals from the A high school. Only one person did not participate in the survey, so the response rate was 95.2%. Therefore, the analysis sample of this study is 20. Eighty five percent of this analysis sample was classroom teachers, and 15% were non-classroom teachers. The survey respondents' work experiences at School A varied, ranging from the first year to 20 years, but the average years of being at this school was 4.06 years ($SD=4.412$). The staff seemed to have been at this school for a relatively short period of time. Their experience of being an educator also showed a wide range from the first year to year 30, with an average of 12.76, which indicated that the surveyed teachers and staffs were generally familiar with the education profession ($SD= 9.871$).

Table 4.2. School A Survey Participants

	N	Minimum	Maximum	Mean	Std. Deviation
YrsSch	18	1	20	4.06	4.412
YrsEducator	17	1	30	12.76	9.871

For School B, Table 4.3 shows that the sample included 27 teachers and paraprofessionals. The response rate was 88.9%, and 83.3% of the analysis sample is classroom teachers, and 16.7% are non-classroom teachers, including administrative and counseling staff. The survey respondents' work experiences at School B varied, ranging from the first year to the seventh year, but the average years of being at this school was 2.58 years ($SD= 1.895$). The staff seemed to be at this school for a fairly short period of

time. Their experience of being an educator also showed a wide range from the first year to year 25, with an average of 8.26, which indicated that the surveyed teachers and staffs were generally familiar with the education profession (SD= 7.302).

Table 4.3. School B Survey Participants

	N	Minimum	Maximum	Mean	Std. Deviation
YrsSch	19	1	7	2.58	1.895
YrsEducator	19	1	25	8.26	7.302

The next section will present an overview of the qualitative data. Relevant quantitative data will be utilized throughout the chapter to help inform and support the qualitative data. The interviews, extant data, and the documents reviewed will help frame the answers to the study's research questions.

Research Question 1

What are the processes that schools in corrective action use to diagnose problems and identify solutions?

When seeking understanding related to the research questions in this study, it was important to take a close look at how these two schools identified problems, and how they established solutions to the problems. This information shed light on how corrective action high schools address their reform efforts as they tried to exit sanction status. In analyzing the process they used in decision making, it was also important to identify the structures established in the process and whether these structures supported the schools' attempts to systematically and consistently address their problems.

Structures/organization

Participants in this study from both of the schools shared that the most common way for identifying problems was by bringing up issues at their weekly Tuesday meetings. Every week on Tuesday afternoons students were dismissed early from each school. This minimum day provided the staff with time to meet and engage in either professional development or in staff meeting sessions. Some of the staff members did not make a firm distinction between professional development or staff meetings. They used the terms interchangeably. Some of the teachers at school A, for example, referred to all of their meetings as professional development. One of them shared “Well, we have PD every week...” (5A); While on the other hand, other teachers said, “..every Tuesday we have a staff meeting.” (5B); and yet another also shared, “Formally, staff meetings once a week on Tuesdays, and that is with the principal.” (8B). Others simply referred to having ‘meetings’ once a week.

Whether professional development or staff meetings, the staff did appear to be clear that at these meetings, issues could be brought up and possible solutions to problems could also be discussed and determined. The following comments reflected how staff members described the process for identifying problems at their sites,

“Probably a fairly informal process which would just be bringing comments up at our meetings, and also sending e-mails or dropping in talking to the principal....” (5A).

We have weekly meetings that we go to, and from time to time issues are brought up and discussed among... among the staff. Issues...English Learner language issues have been brought up. In fact, there’s been professional development that we’ve gone to in how to best approach English language learners. There has been disciplinary issues that have been approached, and we’ve developed a program where we can focus on some of our troubled students... (6B).

Based on the responses from several of the teachers, what the meeting was called did not appear to be of importance. What appeared to be of importance was that they knew Tuesdays were their time to meet and work together as a staff.

Tuesday afternoons are, they're crucial. They're crucial because there's so little time for us all to get together and we wear so many hats. I mean I teach three classes plus the student government, you know, and plus the PBL's and plus everything else, there's just, in a small school it's just really difficult. So those times when we get together become crucial and a lot of the time it's taken away with data which is important but, you know, that's where a lot of our collaboration happens. (3A)

Everybody knows that Tuesday is the best time to share because everybody will be there. (7A)

Every Tuesday we have a staff meeting and this is something that, you know, no one has an excuse for, there's no, you just know, you don't schedule anything, you don't leave early unless it's like an emergency of course....." (5B).

The most important forum for staff members, according to the data, were the weekly Tuesday meetings. The staff understood that attendance at these meetings was expected and they were aware that other matters would have to be put on hold for that day and time of the week. The statements made by the staff members above were confirmed by the school documents that indicated that Tuesday afternoons were set aside by the principals for staff meetings and professional development trainings.

Although these meetings were non-negotiable, it appeared based on the data that the staff valued this time because through these meetings they had the opportunity to stay well informed. It also appeared that the topics for professional development, or meetings, were geared to discuss and address the various student activities or assessments for which they needed to prepare depending on the time of the year. "Professional Development

depends on what is going on throughout the year. For example, today it will be on senior exhibitions.” (7A). This was reflected with other staff members as well.

In our Tuesday afternoon professional development meetings we usually have some kind of professional development, but then we also look at testing scores and we also look at discipline issues and each PD is focused on kind of one aspect or need as we go through the year. (3A).

Contradictory to the comments in support of the Tuesday meeting process made by most of the interviewees, a few staff members reported that the Tuesday process was not systematic for identifying problems and solutions, and it presented a few challenges. One concern, for example, was that these meetings were too short a time period for identifying problems and coming up with possible solutions.

...you bring up the problem and in the hour you're not going to solve your issue, and so that's probably the hardest part is that also another really difficult problem is that not all the teachers discipline in the same way. I mean some people at the school will let you listen, a student listen to the iPod and have it in class and do whatever, where in my classroom like that's not allowed. When you walk in the door you better take your hat off or I'm going to ask you every day. So not every teacher is on board or following the rules that we have set out and we have talked about the rules probably about 30 minutes the first day of when the teacher came back. (10B).

Another teacher simply shared, "...It's not obvious if there is a process.” (1A).

In general, Tuesday meetings appeared to be understood by staff members as the place and time for sharing concerns and for bringing up issues. Although not all agreed that this was an effective process, there seemed to be consistency and agreement about this structure with the majority of the staff members according to the data.

Use of data to determine problem areas

Student data was analyzed at Tuesday meetings to help identify and address the problems associated with the school's overall low performance. According to the staff,

analyzing student data helped to determine the problems that they faced so that interventions could be put in place. Analyzing student data appeared to be common practice at the school sites, and the process for accessing the data was made simple by utilizing a district-wide electronic system, DataDirector. This computer system allowed teachers to access current student data very quickly and easily. This quick access provided teachers and administrators the ability to closely keep track of students' academic needs, which was relevant to their focus on improvement.

It's real simple, but just for documentation purposes, we can look up their CST scores we can go on DataDirector and look up their scores there, if they're in 10th grade or above we can look up their CAHSEE scores and see if they got the high school exit exam or not and then with me I know I do individual assessments, like their reading assessments and longer term of growth in reading and see if they've grown on top of that during the year. So there's different data out there that we can look at and teachers have access to all of it, (4:47 inaudible) and data director are the two common ones that is the entire school. (3B).

The number one process is analyzing data that we already have. A lot of it comes from middle school. Other data is determined by WASC or a lot of reports that we can get ourselves through DataDirector. It is the best report center for student grades, scores, behavior, and citizenship. (7A).

Based on the data analysis, the process for identifying problems appeared to be that the staff members met on Tuesdays to discuss school concerns and to analyze data for the purpose of identifying their students' academic needs. The majority of the staff members appear to be in agreement that this process was a consistent way to keep informed and to address the academic gaps associated with the school's overall low performance. The analysis of student data was reported to propel the implementation of interventions to improve students' progress.

Types of problems identified

Both of the schools in this study are in corrective action year four based on the NCLB sanctions. For this reason it was important to gain insight not only on how the staff engage in identifying issues and solutions but also relevant to explore what problems the staff members identified as getting in the way of their progress.

The staffs reported a number of reasons for underperformance at their schools. Although staffs at each school identified students as the root of the problem, they had different perspectives on what that meant for each. At school A, for example, the interview data indicated that staff members at this school identified their major problem as having a disproportionate number of EL's at their school. They believed that it was because of the low academic achievement level of this particular subgroup of students that their school was underperforming. It was clearly evident in the data that the staff was convinced that it was the low English language levels of their English learner population that was to blame for their corrective action status. To make this point, the administrator from school A shared the following response,

Sixty-six percent EL's, of which 51% are in the Beginning and Early intermediate levels on CELDT. More EL's than any other high school in the district. Language is a huge issue at our school. Students are predominately Spanish speaking students. Another issue is kids don't have the language skills to pass the CAHSEE, which include ELA standards. (10A).

The following teachers from school A shared a very similar response to the same question.

Well, the reason is because we have the majority of students in our school are English learners, and it really takes a long time for an English language learner that has moved here, you know, recently, to be at par with the other students especially because many of the students even in their own language they do not have the preparation that other student might have. (5A).

Language, I mean it's just when you bring a student in when they're 16 and expect them to take a CAHSEE test at 17 it's not possible, you know, there's not time to acquire a language to that ability.... (3A).

"...I would say the first and foremost is that we are 70% English language learners and related to that the CAHSEE test is impossible for some of these students. CST phrasing and it's just the level of English is too great for some of these students to comprehend. (2A).

School B also mentioned having a large number of EL's and that that was a problem for their overall progress; however, this did not surface as their number one reason for their underperformance.

At school B the staff members identified their biggest challenge to be that their students lacked high school readiness skills. They stated that their students were simply not well prepared academically or socially to attend high school. Staff identified this as their major reason for their schools' underperformance. One of the comment shared by a teacher at school B was,

"Oh I feel like it really has to do with who's coming in, who comes through our doors, I think it's the preparedness level of the students and you know we get what their total experiences are, the successes and failures are so far in education, but by this time they're in high school. So it's still our responsibility to try to have them become as successful as possible but it's a huge challenge because a lot of them are so far behind that they come with very low skills." (2B).

Teachers at this school felt that they had the lowest performing students on the entire campus. The frustration with the academic level in which students were arriving to their high school was expressed by most of the teachers at this school. They shared that although the students might be at the right age to be in high school, their academic skill levels were certainly not.

I see that honestly, we're getting students in here that are two, at least two years below grade level. They're coming in as supposedly 9th graders and really they're more like 6th grade. I get students that want to use the bathroom and I tell them okay, fill out a pass, they can't read the clock, they don't know how to read a clock. They're coming in at such a low level of education. Yeah, so altogether their skill set is not, you look at these kids as 14, 15 year old students and honestly they're more like 10, 11, 12 year olds. (9B).

One of the main ones is just, you know, when we get our students, they are. . They are tested. They're coming . . . They're coming in with a, you know, fifth grade level reading, fourth grade reading levels. So when we get them, you know, maybe we'll bump them up two grades or three grades, but I mean it's impossible . . . Or it's very difficult, not impossible, very difficult to get somebody from a fourth grade reading level to perform. . you know, to perform the expectations from the school. It's very difficult. (1B).

The formal documents indicated that both schools were challenged with the low academic performance of their students. The scores over the past years reflected that the schools have not met expected growth targets in student performance. Both schools reported that their students were not prepared to achieve at proficient levels on district or state assessments and therefore this resulted in their schools' underperformance.

Other contributing factors of underperformance

In addition to the main problems identified above, both schools also mentioned having other factors influencing their schools' poor performance. Issues dealing with discipline, attendance, and parent, teacher, and student apathy were also reported by staffs. Some teachers shared that poverty, transiency, and budget cuts were other also contributing factors. Staff members attributed that these problems, accompanied by their students' second language issues and poor readiness skills, affected their school's academic performance and scores. The following comments are representative of the staffs' concerns.

“...Attendance is a big problem.” (3B).

Another problem is attendance. Historically attendance has been 87-88%. Students are below grade level skills. The poverty level, 94% receive free or reduced lunch. 10% are foster and homeless students. We enroll year-round. We are the neighborhood school and have a very transient population. (10A).

Attendance surfaced as being an equally challenging problem for both of the schools. According to the data analysis, staff members believed that one of the reasons that students would miss school was because of lack of money to pay for transportation.

Another problem that staff members said contributed to their schools' underperformance was apathy. Several teachers shared that apathy on the part of teachers and students was a problem. The following comment is representative of the overall statements made in regards to apathy,

Apathy with teachers and students. They are apathetic, they don't feel like they can change and, um, they feel like they are stuck in this and there is no way of getting out. I came in an F student I am going to stay an F student. I came as a mediocre teacher and it's working. I mean that's how..... (7B).

When it came to discipline issues at the sites, some teachers believed that students not only lacked the academic muscle, but also the social conduct to experience success at the high school level. One teacher stated, “In this school I have seen the most defiant behavior I have ever seen. Therefore there hasn't been any meaningful improvement because of this.” “This is a party zone, they come here to socialize and they get away with that.” (6A).

Finally, there was another problem that surfaced in the interviews. This problem was attributed to the small school model. A staff member at School A, felt that their

school was underperforming because when the comprehensive high school was divided into small schools, their school inherited the lowest performing students.

If you take any comprehensive high school and you cut off the bottom 15% or so and say, you're a separate school. And do the same on the top level and say, you are a separate school you're going to have the same kind of issues we have here. I don't think we are unique. I think that because of the small school strategy, we've isolated the lower-performing students and created this as a separate school with a separate principal. We have the lower. I don't feel. We DO have the lower. (6B).

The main problems identified with the schools' underperformance were reported to being the students' low level of performance on district and state assessments when they entered the schools. Specifically, at school A, the main reason cited the number of EL's and their low English language levels. For school B, the main reason reported was the students' lack of academic skills. At both schools, other significant, but secondary reasons, according to the staffs, were also reported. These reasons ranged from attendance, discipline, poverty, and apathy.

Solutions identified

In analyzing the process the two corrective action high schools use in reform efforts, the study investigated the solutions selected and how the staff arrived at the solutions to their problems. The problems and solutions identified were examined for the purpose of seeing if the solutions directly addressed the problems. The data indicated that there were similar issues being recognized as problems as well as similar solutions being selected to address the problems at both schools. For example, both schools identified the problem of low CAHSEE scores and passing rates. In order to address this problem the two schools implemented intervention programs such as after school tutoring, and CAHSEE small support groups (one of the schools called it CAHSEE Boot

Camp). “Small group pull outs are based on CST scores to help bump them up, everyone is hands on board.” (10A). One teacher described her role in preparing students for the CAHSEE,

We have an English teacher that teaches the CAHSEE prep class, but our principal wanted me to run the CAHSEE Boot camps.....I got the struggling 10th graders who can't write a sentence in February and had to take the CAHSEE in March. (7B)

So since the beginning of the school other things that have been identified have been after school programs, for example, I run a before school and after school tutoring program. So an hour every morning before school, it's an open door, kids come in and they can just hang out or they can get help with their homework, it's call a breakfast club, we have food that's available and then after school every day except Tuesdays when we have staff meetings students can come in and drop in for tutoring. (2B).

To address the discipline, attendance, and excessive tardiness problems, the staffs selected many different interventions. To help address discipline problems, the schools adopted the Positive Behavior Intervention Strategies (PBIS). The PBIS is a program that the district supports and trains teachers at sites to be able to better plan their schools' systems and daily functions to support positive student behaviors and to decrease behaviors that negatively influence student achievement. All schools at the site implement this program. Stricter consequences were also reinforced to minimize tardiness and absenteeism. Students arriving late now have to spend their lunch time in detention. For this to occur, teachers give up an hour of their prep time to make sure that students that are supposed to serve their time do so. Attendance has been a focus for the administrators at the schools, so much so that the attendance at school A, for example, has improved from 87% to 92% within the last year. The schools added attendance

incentives for students such as recognition certificates. One teacher shared, “We now have recognition assemblies and we offer raffles for good attendance.” (7A).

Although both sites reported many interventions implemented on campus, some staff members expressed concern over the effectiveness of the interventions. They felt that there was not an overall plan to address issues systematically, questioned the quality of the interventions, and that students were not taking advantage of the interventions offered.

“I think there’s no system, I mean we try to set a system but I don’t think there is a set system. I think we look at the problem and try to solve it in a minimum time.” (2A).

“We’ve had after school programs available to students who are CAHSEE support. We have natural classes, they’ve been held after school, they’ve been given on weekends in the past and it’s always the same story, it’s like pulling teeth to get the kids there. So it’s not that we don’t offer things, it’s actually how do you get the kids, the same kids who were not interested in school, how do you get them to participate in after school stuff to fill in some of the gaps. So we have programs, good programs the students take advantage of, but they’re not effective in a sense that so few people do take advantage.” (2B).

Another teacher shared that professional development, as a strategy to improve achievement, does not meet everyone’s needs at the site. In fact, one teacher felt that the focus for their PD was not necessarily on target to making real progress. He said, “Professional development yesterday was a waste of time. There are more realistic things we need to do. Teaching to the test professional development does not help.” (6A).

One of the solutions selected by the staff to address the issue of discipline at the school sites was detention, however, one of the teachers expressed that discipline was still a problem and follow-through with detention and consequences in general was also a problem.

“...we don’t have follow through when it comes to discipline in the sense that students come and go as they please, they are here late and there is nothing we really do.” “.....there is no consequence for anything really, detention, nobody goes to detention or very little.” (5A).

Student discipline problems were reported at both schools. According to the data, it was an ongoing problem. Staff members gave up some of their own time to put in place a school-wide system of detention to eradicate this problem. These efforts were making some change, but not as rapidly as desired.

According to the data, most teachers did not believe that they would be able to exit program improvement sanctions despite their attempts towards improvement efforts. They felt that their problems were too profound to exit sanctions. One of the teachers shared his doubts by saying,

We try a lot of things, so we can identify things, we can implement them, the question is, I think the more important question is, how effective are the ones that we’ve tried. So far they haven’t been that effective, but we are trying different things (2B)

One teacher also shared that although they were making some improvements at the site, it will most likely not be enough. He shared, “..I think we are going to improve. Are we going to improve to where we need to be? No...” (9B). The majority of responses were very similar. One teacher did not only believe that his school would not exit sanctions, he also believed very few other schools would exit them. He stated “Under present plan we won’t, maybe 1% in the nation will do that, but the rest will fail. Revisions need to be made to what NCLB set out to do – it’s political.” (6A). One of the teachers directly referred back to what he stated was the reason for the school’s underperformance. He stated, “Actually, no. If we continue with the same population we

probably won't be able to because we have such a heavy burden in the second language population..." (5A).

The quantitative data strongly supported the teachers' interview responses at both of the schools. When asked whether their school would move out of Program Improvement at the end of this year on the survey, 16.7 % of the staff in school A believed that they would, and 83.3% believed that they would not (Table 4.4). At school B, 15.8% of the staff believed that they would exit sanctions, and 84.2% believed that they would not. The analysis was based on a sample of 18 respondents (Table 4.5). The items were based on a four-point-Likert-scale. One point indicates that participants strongly disagree and four points mean that they strongly agreed.

Table 4.4. School A Belief in Exiting NCLB Sanctions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	14.3	16.7	16.7
	2	15	71.4	83.3	100.0
	Total	18	85.7	100.0	
Total		21	100.0		

Table 4.5. School B Belief in Exiting NCLB Sanctions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	11.1	15.8	15.8
	2	16	59.3	84.2	100.0
	Total	19	70.4	100.0	
Total		27	100.0		

Decisions making process

Another area that was an important aspect when investigating the schools' process was who engaged in the decision-making as solutions were being prescribed for the

problems identified. The study set out to find out if there were specific key players in the decision-making process, including the role of the administration. Staff members responded to direct questions about who was involved in making decisions related to problem identification and solutions selected at their sites.

Several staff members shared that everyone on campus had opportunities to give input in decision making. They said that they could bring up issues and discuss ideas for addressing problems at the weekly meetings. "...well we have a staff meeting where everybody can raise their voice and concerns..But yeah, definitely we have a say in the matters." (9A). Another teacher shared "I think that, you know, a couple of teachers will tip the principal off and then the principal will address it in a meeting, and as a group we will come together and figure out... OK, what do we want to do." (7B).

Some participants identified the principal and other key staff members as the decision makers at the site. One teacher shared, "The principal and counselor deal with decision making. Staff brings up concerns and solutions are made by principal and counselor." (6A). A teacher shared that she was a part of leadership team that is supposed to meet to help make decisions at the site, however, that the team had only met once in over three months, "I guess you could say, my principal pretty much makes decisions and I think being part of the leadership group, I mean we've only met once this year, so I mean.....(10B). Another staff member also shared that although there were teams that helped with the decision making at the site, the principal was still seen as the decision maker, "Well, the decision makers are definitely the principals.....She also leads the teams that are to work on certain things... (5B).

In addition to being able to provide input at staff meetings in regards to decision making, staff members reported that several committees were established to problem solve and help make decisions around certain aspects of the school. One teacher shared that teachers signed up for committees and although the committees are predesigned the committees had an opportunity to decide how best to address any given situation related to their committee.

So groups were pre-designed, your choice was which group you want to belong to and then that group's function...., you know, it was up to you guys in the group. ..So for example, like if you were on a social committee you'd work on creating some sense of a community on the campus through organizing happy hours or raffles or holiday parties, or something like that." (4A).

One of the committees most talked about by staff was the Instructional Leadership Team (ILT). The ILT, according to the staff, was comprised of classroom teachers (mainly department heads), other key staff members such as the counselors, and the principal. This team was said to help come up with decisions at the site by discussing issues as a small team and then bringing the issues back to the staff for feedback.

We have an ILT team which is a leadership team where, you know, a smaller group of teachers look at these problems. We try to work solutions...for different areas and then in our meetings...our Tuesday meetings, we open it up to everybody to participate and to include them...and help the team decide what's best. (1B)

So the principal and the leadership team and the teachers all kind of work together as far as building information as far as ideas that need to be focused on, and then the leadership team, their primary goal is to kind of weed out and figure out what we actually can accomplish and then put it together and then bring it back to the faculty. (3A).

Staff members from both sites reported being a part of the decision making process. They felt that at the Tuesday meetings, everyone could share their input and

have a say in matters of decisions needing to be made at their schools. Serving in committees was also a way to help make decisions at the site according to the interviews. Some felt very comfortable going talking to principal to make suggestions. Many staff members also identified the principal, counselor, and the ILT as the decision makers, but especially the principals.

District involvement in identifying problems and solutions

The majority of the participants shared that the weekly meetings were the structure that supported their process for identifying problems and searching for solutions. They also reported that they had opportunities to give their input at those meetings. However, that was not the case when the communication between the schools and the district's central office was examined. The communication lines between the schools and the district was altogether a different perception. The data indicated that the connections between the schools and the district office were weak. In some cases, it was reported that the district was not much of a support at all when it came to being involved in helping the schools identify problem and solutions. A couple teachers expressed that the district mainly pointed out their weaknesses. Here is what one of the teachers had to say,

The district, you know, they pretty much tell us you're not meeting your goals, do something about it, they don't give us, I know I'm not for the teachers per se, something very special, that's probably more coming from district to the administrator then the administrator implements a way for us to reach those goals. Nothing specific from the district to the teacher is given, you know, where its district, principal, teachers..... So in terms of support I don't think we're getting very much of it. (3B).

Another teacher shared a similar concern,

They're happy to tell us our weaknesses. ...there are tests everywhere that are being close to scrutinized the CAHSEE results and CST results, we all have access to DataDirector and we're encouraged and required to look at that and keep track of how students are doing. So I mean we know how our kids are doing, that's the easy part. The hard part is to do it. (2B).

One of the teachers felt very strongly about her discontentment with the district because she believed that the district office is not really looking at people, but numbers. She shared,

I think that the district is too big to be specific to schools. I think that the district is looking at numbers and figures and I don't think the district is actually looking at human beings, how to really increase them, I mean we're supposed to like, we want to increase our scores, so therefore we have to teach to the test... (10B).

The responses strongly suggested that although personnel from the central office had visited their site on a couple of occasions, they did not really help with identifying solutions for their school. In regard to this question, one teacher replied, "I think the budget cuts make it tougher right now, so it might say on paper and try to say that they do that, but they don't." (8B).

Other teachers explained that although the district has had some involvement with the school in terms of helping them identify solutions that they fell short of really fulfilling that need. This is what one of the teachers shared about the district's involvement with their school,

It's probably not as good as it could have been. The district is a big machine, I believe it's the second largest district in California, which it's a little bit too big, just a little bit too much stuff going on so I don't think the district has, how should I put it, maybe they could have done a little more. (9A).

One of the administrators was in sync with the other staff members in terms of the lack of district involvement or leadership in supporting the schools. When asked the

question of what role the district played in helping identify problems and to search for solutions, she stated,

None. Our SIO kind of knew of the issues around enrollment and things like that, and the he would talk to the cabinet and then superintendent (name) and the board expected us to come up with a restructuring plan. But most district folks don't really understand small schools, and anything that we do has to come from us because there hasn't been leadership from the top around how we interpret working together as small schools. If we can't figure it out as six principals no one is giving us direction or mandate other than superintendent "name" has said, 'you need to look at your English learners and look at how to improve achievement for all kids. We did have a retired administrator facilitate two leadership retreats to help us look at the five areas that we have to focus on ...But we had to come up with the ideas on our own. (10A).

In summary, staff reported that they had a process for identifying problems and solutions. They stated that the process involved using student data to determine areas for improvement, discussions of options, and coming to an agreement on the solutions for implementation. The staff shared that the weekly meeting was the primary structure for the process of identifying and solving problems. Some staff members mentioned formal committees that engaged in decision making, however, they shared that the committees brought the decisions back to the weekly meeting for staff input. The staff members reported being able to share input, but ultimately the principal would make the decisions. The interviewees stated that there was little district involvement in decision making on site related to improvement efforts.

Research Question 2

How do schools in corrective action define, acquire, use, and diffuse research evidence?

In order to gain a deeper understanding of how these two schools in corrective action applied solutions to the identified problems, it was important to take a close look at

how the staff members defined research evidence, how they acquired, used, and diffused it. This will help understand what information they are utilizing for making decisions for the problems they have to support their efforts in improving their overall academic achievement.

Definition of research evidence

The analysis of the data indicates that staff members at these corrective action schools shared a common definition of the term research evidence. Based on their responses to the protocol questions, research evidence was defined as student data. Any student assessment with a measurable score was considered student data. For example, the annual California Standard Test (CST), the California High School Exit Exam (CAHSEE), and any other on-going district and school assessments that might be available for the purpose of determining students' overall academic status was considered to be research evidence. One of the staff members summed up the overall responses provided as the definition to the term research evidence by saying, "Evidence is just test results. That's the bottom line". (1B).

Many of the responses were very similar to the one above leaving little room for any misunderstanding about how this term was defined by the staff at the corrective action schools. Whether it was a new hire or a seasoned teacher, a member of the Instructional Leadership Team (ILT), a counselor, or a PE teacher, the response was unmistakably student data. Here are what they shared about how they defined research evidence at their school, "Test scores, that is how we measure student learning, any kind of data" (7B). "Test scores, quantitative over qualitative." (8B). "Both quantitative and qualitative" (9B). "Test scores and data related to test" (1A). "Data, just data. I think

that is what everybody thinks it is.” (7A). “Evidence I would guess, would just be objective results that indicate that students are learning at a higher rate, I think” (2B). “Numbers, statistics, scores, API scores” (10B). “...It comes down to test scores” (8B).

Some of the staff members defined the term a little more in depth. Albeit, they did not disagree with the definition given by their colleagues above, they just simple added that aside from data, the term meant a little more to them. One teacher, for example, shared “Well, I am a science teacher, so for evidence I’d like to see concrete data to support that. But not everything can be done that way. Sometimes there’s attitude, there’s behavior. There are indicators of improvement that are not always quantified” (6B). One of the administrators defined evidence as “Things that work at other schools. Structures that can be put into place that will help students be successful”. (11B). Another administrator elaborated even further than that and defined the term as follows:

Achievement data, CST, CAHSEE, graduation rate, Benchmark, student monitoring sheets, attendance data, suspension data, professional development agendas, and notes, SSC agendas and minutes, who’s involved in reviewing data, subgroup data: EL’s, Hispanic, low SED, smart goals, classroom observation data – written feedback, grades, F rate by teacher, a lot of individual student data. (10A).

One of the administrators believed that thanks to the learning in which she is involved through her doctor program, she is better able to understand research and its purpose. She brings in research to share with the staff that is relevant to the needs that they are facing at the school. She shares articles to support the ideas behind possible interventions at their site that could support their efforts toward improving in their achievement. She is also encouraging and working on arranging visits for her teachers to

go to other sites for the purpose of exposing them to other teacher practices that might help improve student performance at her school.

There is a clear, concise, and common language that staff members use to define research evidence at these corrective action high schools. Their evidence matches the way in which they indicate and diagnose problems as well as establish solutions at their school.

Acquisition, use, and diffusion of research evidence

Extensive student data is not exclusive to administrators at the school site. Data is also very accessible to all staff members through a computer program, DataDirector. DataDirector is the most common place from which staff members can retrieve student test results such as CST, CAHSEE, Benchmarks, and class grades. All staff members have been trained on how to navigate through this program so that they are able to pull up, either, existing reports or create their own report based on specific information they may want or need to analyze. Having access to this ‘evidence’ is intended to provide staff members with the necessary information for the purpose of making decisions about how to help students improve.

Student data, as stated by staff members, is the evidence that informs them about their overall academic school status and progress. Staff members rely on the data to identify problems and it appears to be the driving force that dictates the focus of their work as they move toward implementing interventions for improvement. When asked for example, What types of evidence does your school use in decision making related to reform? One teacher responded, “CST, the CAHSEE, you know, using DataDirector has been huge.” (8B). All teachers are expected to know how to access student data through

DataDirector including teachers that do not necessarily teach in the classroom. A PE teacher describes here how she is no exception to this expectation, “We’ve had to research all of our class and look at each student individually and chart out like where they are on each test, even though I’m in PE I’ve learned their science, their history...”

(8B). A school counselor responded by sharing,

The number one process that we have is analyzing data that we already have. Some of this data follows the students from middle school and other data is determined by WASC, or by reports that we can pull up on our own using DataDirector. (7A).

Finally, a classroom teacher responded, “I think with the research evidence, we look at data...” (5A).

Based on the data analysis, the staff members at the corrective action schools defined research evidence as student data. These data were said to be acquired through reports retrieved through DataDirector and everyone at both schools has been trained to use this computer program. Furthermore, every staff member on campus that works with students directly is expected to know how to access student data as well. The next step in the analysis was to investigate how these data, or evidence, were used as an instructional approach to prescribe solutions that supported academic progress.

When the staff members were asked to provide an example of a recent reform their school had adopted, where it came from and what evidence they used to support its adoption, the responses were predominately around the same issues in which the staff reported being challenged. One of these issues was that of student excessive absenteeism and tardiness at the schools. Based the schools’ attendance data, the attendance rate was as low as 87-88%. Due to these disparaging percentages, the schools decided to

implement the Positive Behavior Intervention Strategies (PBIS) program. The implementation of this program was proving to be making some progress in this area. This is what the principal at school A, for example, explained about the improvement of tardies and absenteeism based on the adoption of this program,

As a complex we adopted PBIS to decrease student tardiness and absences school wide, the program is from Safe and Civil School Consultant Group and Research. We used to have 30-40 tardies per day. This has decreased our period one tardiness. (10A).

We've had historically 87-88% attendance and when students aren't in schools or are late to class they don't have the skills to do the work without being here, without teacher assistance. We have now improved attendance. Attendance rate has improved to 92%. Our goal for 2010-2011 is to increase to 93%. (10A).

Several teachers also referred to the PBIS program as a reform recently adopted to improve attendance. This is what one teacher had to say,

The PBIS program. All principals agreed to do this program. I don't know who's idea it was originally, but I know that they went to other schools where they had been already implementing it and had improved their schools. I think, from where I can see that most of the teachers have bought into this and it has improved a lot where, you know, the students in my classrooms are on time. There aren't any students in the hallways. The campus is a lot cleaner and I see overall that the kids are better behaved because they have, you know, true consequences and are held to a higher standard, which the students are actually responding to positively. (9B).

Some of the responses in this particular area of inquiry appeared to be very vague and even non-related to the more fundamental issues facing the schools. One teacher for example, responded, "Yeah, lanyards. I think that it helped. Before you would see students . . . Even though it's a smaller school, sometimes you would have new teachers that they didn't know all the students, or it helps for security reasons that, you know, you're able to identify them, you know, a lot better. So it's something that . . . something

that works.” (1B). Another teacher responded as follows to the same question, “.I don’t know, I can’t think of anything. Oh, a nutrition break, we didn’t have a nutrition break last year. Now we have nutrition break. So that students can bring a snack and eat it between first and second period.” (7B).

Although the responses to this particular question left room for some level of uncertainty in regards to what current reform measures the staff had implemented, a deeper analysis of data revealed that the staff was attempting to deal with various issues they thought were getting in the way of progress. Based on the data that the staff members had available to them, and had analyzed, in regards to EL performance, they implemented training for classroom teachers that supported the improvement of teaching practices for English learners. Staff members were provided with the Quality Teaching for English Learners (QTEL) training program. This program was mentioned by several of the teachers and the administrators throughout the interviews, in particular when discussing PD foci. QTEL is a five day institute for teaching teachers content specific strategies that support English language development for English learners.

The data also indicates that other interventions have been put in place as part in an effort to improve student academic performance. The schools implemented Saturday School for students to make up classes and credits. A boot camp and small group CAHSEE tutoring program were put into place to help students develop the necessary skills to pass this exam. Teachers and administrators utilized the student data to determine what students to include in these intervention programs.

Data related to student assessment results is publicly shared by administrators at meetings with the staff. It is analyzed and discussed at meetings and it is used to place interventions in motion. Data is also clearly posted on the schools grounds to be viewed by all staff members and visitors. Interviewees indicated that data now is everywhere on the campus.

One of the ways in which information and knowledge is diffused throughout the schools is by all working together, but at various capacities.

In our Tuesday afternoon professional development meetings we usually have some kind of professional development, but then we also look at testing scores and we also look at discipline issues and each PD is focused on kind of one aspect or need as we go through the year. So the principal and the leadership team and the teachers all kind of work together as far as building information as far as ideas that need to be focused on, and then the leadership team, their primary goal is to kind of weed out and figure out what we actually can accomplish and then put it together and then bring it back to the faculty. (3A).

Research evidence was defined by the staff members as student assessment data. Although the staff did not use this particular term to refer to it they reported that student data was their evidence. Everyone at the schools had access to student data through the district's DataDirector computer program and data were also discussed and analyzed by the staff members at meetings. They reported utilizing data for the purpose of identifying the academic gaps at their schools and to identify possible solutions to fill these gaps.

Research Question 3

In what ways and to what extent is information, knowledge, and innovation diffused throughout corrective action schools through social networks?

This particular question was designed to investigate how the staff members engaged with one another for the purpose of acquiring information, knowledge, and

innovation (the types of ties), the type of information that was shared among them (boundary spanners), and who engaged in sharing the information, knowledge and innovation at the sites.

How information, knowledge, and innovation are shared

From analyzing the data, there were a range of responses from the staff members shed insight on how information, knowledge, and innovation were diffused at the schools. Within the range of these responses, a couple of challenges surfaced as a hindrance to their networks. One of these challenges was the size of the departments for teachers. Some of the departments consisted of two or three teachers, while others had only one. This is how one teacher perceived the struggles of the teachers and their small departments, “The school is so small. I mean there’s one biology teacher. He teaches biology and chemistry. He is all by himself. You know he can’t collaborate with anybody. There is one U.S History teacher. Talk about isolation.” (1A). Another challenge mentioned was that even with more teachers in a department, networking proved to be a challenge because teachers did not share a common prep period with their department colleagues.

I’ll tell you sort of the sad truth is that I’m basically in a cocoon here even though, you know, I’ve been in the school like I said it was my fifth year and the staff has changed quite a bit, so there are only four or five of us who have been here since the beginning and because we don’t have, like I don’t share a common prep with any of my math colleagues that we’re all kind of doing our own thing. So I pretty much do my own thing. (2B).

To some staff members, the concern was not having a common prep in a department to share their practice with one another, and the lack of new knowledge

coming in and out of the departments. She shared, “..The departments are so small, you know, and to be two science teachers, so there isn’t that much to share.” (5A).

Since both of the schools in this study are small high schools, the size was reported to being an issue at both. Furthermore, participants also shared that the connection with the other schools on site did not exist and therefore the schools on the campus did not engage in sharing of information, knowledge, and innovation. One of the administrators shared, for example, “Small schools hinder the sharing of ideas. We don’t share our resources around instruction.” (10A).

Other problems that surfaced in the analysis of the data in regards to the hindrance of the sites’ networks were time, budget constraints, attitudes, and the lack of places to meet. One teacher shared, for example, that time and the funds to receive the needed collaboration between teachers at the school sites was a challenge. “Time is an issue. Having more mandated time to do that is always a good thing, but again, that is tied to budget and money.” (6B). Another teacher also shared, “In all honesty we share as much as we can, the truth is that the amount of time we spend trying to take care of class on top of everything else, there is very little collaboration overall.” (2A). Other thoughts shared in regards to what hindered the sharing of information, knowledge, and innovation were, “Certain individuals with negative attitudes.” (11B). and “Not having places to meet” (1A).

The range of responses also shed insight on the structures that facilitated the social networks at the sites. For example, the participants reported being able to share information and ideas with one another through the use of technology. Much of the information that circulated the campus for the purpose of connecting with one another,

according to teachers, was done through email. One teacher said, for example, “Through email, we collaborate...” (2A). Another teacher shared, “I think we love email.” “You see a lot of ‘look, I found this article.’ we email or we share at staff meetings, it goes back and forth.” (7A). According to one of the principals, “operational issues are usually done by email.” (10A).

Aside from emails being a bridge to facilitating the sharing of information among the staff at the corrective action schools, staff members also shared a variety of other ways in which they networked with one other. One of the staff members reported that a way in which information was made available to all staff members that was very helpful in staying abreast of what was going at the school, was through receiving the weekly bulletins. “...Everybody knows what is going on.... Having a bulletin every week, ready on Monday mornings.” (1B). The staff indicated that they have multiple ways to share information, knowledge, and innovation.

Perception of the existing social networks between staff members

The staff perceived the overall communication patterns between the staff members as good. Several of them believed that there were sufficient ways to communicate with each other at their schools. Here is what some of them had to say in regards to their perceptions about the communication patterns among colleagues,

Very open to communicate.....our weekly meetings puts us in contact with all staff on a regular basis.I can talk to “staff” whenever I need to.That is the advantage of a small school you get to know the staff a lot better. (9B).

I think we have great communication among the staff and principal through, email through, you know, having phone calls and professional development to find out what is going on with the our school. So over all pretty good. (10B).

Other teachers shared the same feelings. One teacher said, “I think it’s good because we meet every week. It’s good.” (5A).

The administrators also believed that the communication patterns are pretty strong based on their responses. Here is what one of them shared,

I think that we still need to work on certain things, but I think they know, teachers, can talk to me or talk to the dean of students. I think communication is pretty good, one because I am very open to what I am doing and so, for example, the bulletin I communicate in that way, we have the staff meetings, I definitely, you know, right away get on the phone or, for example, just giving my cell number to every single teacher so they can text me, those kind of things. Also, I have a great admin aide that she comes and tells me things, you know what, the teacher didn’t disrupt you, but she needed this, ‘we really have to deal with period 3’, or I mean the teachers feel very comfortable coming in here. (11B).

Another administrator shared,

Actually, there’s a lot of informal communication. Like people could go to each other a lot umm... for support here and there. They’ll come to me a lot, they go the counselors. Sometimes we over-communicate. We are a pretty communicative group. (1A).

Others agreed that email supported the communication at the site, as well as the staff meetings. One teacher shared, “weekly meetings and emails are open forums to share ideas.” (9B). There were others that felt they always had opportunities to share information with other staff members. One very optimistic teacher for example, shared, “I can’t think of anything that hinders the sharing of ideas...I think, with Tuesday meetings, there is always a forum for everyone to share ideas”. (9B). In general, the majority of the participants that were asked that question perceived the communication patterns as good between the staff. These statements would hold true to the overall responses of the staff members on the quantitative data as shown on Tables 4.6 and 4.7.

At school A, 64.7% of the respondents thought that the school had forums for sharing information among staff ($M= 2.76$, $SD= .664$). The items in the following tables were based on a four-point-Likert-scale. One point indicates that participants strongly disagree and four points mean that they strongly agreed.

Table 4.6. School A Forums for Sharing Ideas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	6	28.6	35.3	35.3
	3	9	42.9	52.9	88.2
	4	2	9.5	11.8	100.0
	Total	17	81.0	100.0	
Total		21	100.0		

According to the survey data, 95% of the respondents at school B agreed that the school had forums for sharing information among staff. ($M=3.05$, $SD= .394$).

Table 4.7. School B Forums for Sharing Ideas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	3.7	5.0	5.0
	3	17	63.0	85.0	90.0
	4	2	7.4	10.0	100.0
	Total	20	74.1	100.0	
Total		27	100.0		

Innovators at the site

Understanding the formal and informal ways in which staff members network with each other also shed some light on who they turn to for innovation and expertise related to schoolwide improvement efforts. Most staff members reported that the principal is the innovator at their site and therefore, also the person that they look to for expertise. One of the teachers mentioned, “It all starts with the principal.” (7A). Another teacher shared, “Well, I think that the principal, she’s very committed and very

willing to share and to listen...” (5A). The staff members emphasized the same perspective in the following remarks,

Oh the principal is very good about, she observes classrooms and if she observes something that’s being done really well she’ll directly approach the teacher and say would you present this and they, you know, so I mean it’s pretty direct when she says go teach it. (3A).

Our principal has got an Ed.D in I think educational leadership, so she brings some research and stuff like that. (2A).

Our principal has, you know, a lot of data on different schools. So she’s . . . She, you know, tends to share a lot of information, giving us articles, giving us, you know, stories from other schools that she was working on previously. (1B).

...I think there could be more and more opportunity to share ideas, but I think that’s probably where it would come from. I think the principal....our current principal is spending a lot of time looking at other models. She has gone out of state to see other schools that have similar populations and some strategies that have worked there. (6B).

Although the principals were reported to be the innovators and the initiators of ideas that flowed around the campus, a couple of teachers reported going beyond the principal for new ideas. One teacher, for example, reported going on the internet to seek other teacher websites to connect with them. He stated, “I use other teacher’s web pages....Teachers are looking for other teachers, not textbooks, but other teachers that are doing things that they can take lesson plans from”. (4A). Other teachers shared that they look to other teachers for innovation and expertise,

I look to other teachers who I’ve known been teaching for a long time and a lot of them don’t teach here anymore, there over at (school), they’re over at (school), so I look to colleagues who I’ve known for, you know, eight or nine years and have been teaching for that long and also colleagues who are now my colleagues but also went to school with. I have a teacher here we went to college together, we went through our credential program together and now we’re teaching together, actually there’s two teachers at just this small school alone and I have teacher friends like that over the

district so I look to them for advice. But also the teachers here that I know have been here a while and that have been in the game longer, you know, I'll look to them for advice. (3B).

Finally, when asked where the staff would seek expertise, one administrator responded, "They don't go anywhere, really they don't. I just have to provide it." (11B).

It appeared based on the data, that not only did teachers at the two schools see their administrators as the innovators of ideas and experts around school improvement, but the administrators themselves felt that they had to provide this type of support to their staffs. The quantitative data supports the statements made by the staff members at each school. Figures 4.1 and 4.2 below, indicate that the principals, the bigger nodes, were at the center of the network in distributing and sharing ideas and expertise. This was even more evident in school A. The map in Figure 4.1 shows that the individuals rely directly on the principal. The arrows indicate that the flow of information goes from principal to individual teachers. The map on Figure 4.2, indicates that although the principal, also one of the bigger the nodes, may be relied on to distribute and share ideas, the arrows demonstrate better networks where all staff members are involved in sharing information with each other.

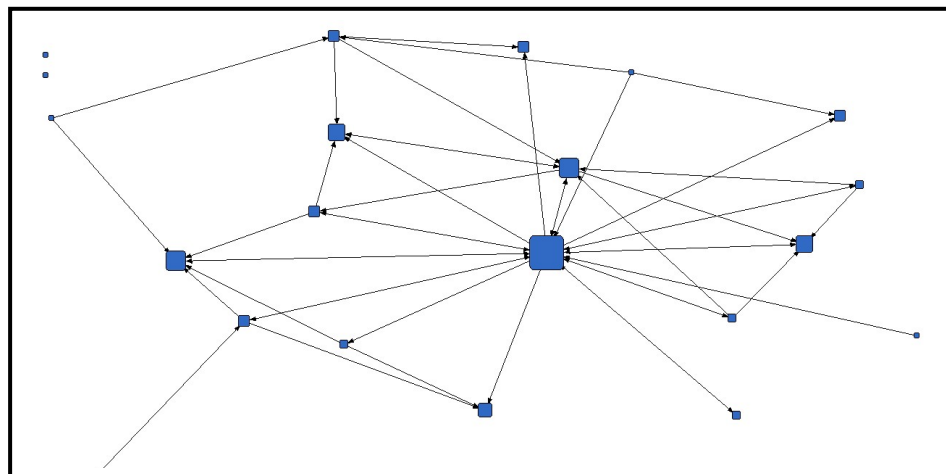


Figure 4.1. School A Source of Ideas

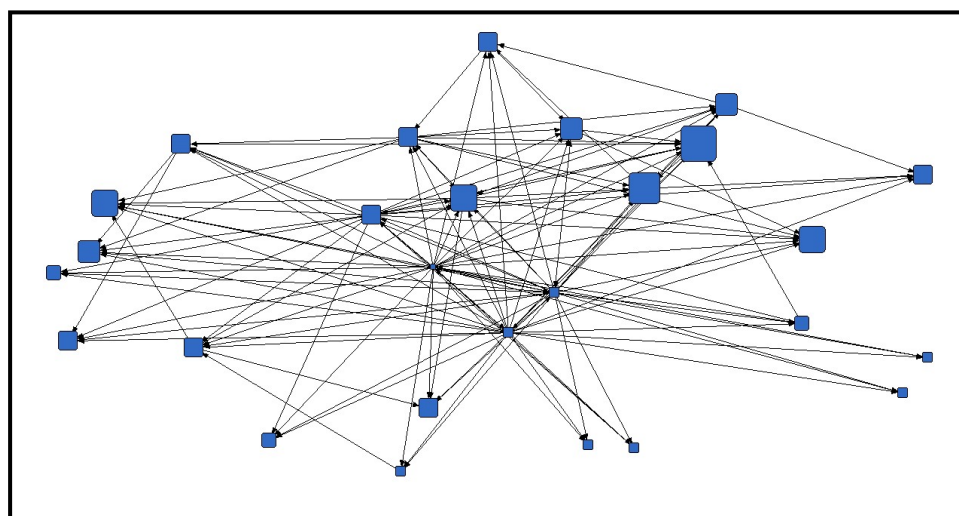


Figure 4.2. School B Source of Ideas

Existing social networks between the schools and district office

According to the data, there does not appear to be a strong working relationship between the school members and the central office. The majority of the school staff members reported that they did not have much direct contact or a relationship with the district's central staff. This finding mirrors their responses around the lack of its involvement in helping identify the schools' problems and solutions discussed in research

question one. Many teachers claimed that they did not directly deal with employees from the district office and therefore did not really have a relationship with them.

Central office, umm, I don't know what the staff has to do with central office other than the budget. I know the superintendent has been here to the school a couple of times and (school) works with the central office a lot more than individual teachers do. So I really can't say. I don't have much contact with central office besides what is passed down to me from my boss. ..I never had a situation where I needed to go to them. (9B).

One teacher felt that the district actually got in the way of their work instead of help. This teacher said about his working relationship with the district's central staff, "They come here sometimes to promote the same old story instead of working with us and letting us do our jobs....To intimidate you and get you out of teaching. My way or the highway." (6A). Other teachers shared that a common response among the teachers when having to go to the central office was, "..Oh God, do I have to go down there..." (3B). Another teacher simply said, "there is no central office." (2A).

There were other staff members that reported that certain departments from the central office were involved with their school. One teacher shared, "We work with the SARC program to improve attendance and we use as many resources as we can from them." (7A). One other teacher did not feel that there was a relationship, per se, but that some level of support was being provided by the central office. When asked about the role of the central office, she responded, "I mean, none that I know of, except for the ESL teachers are given a lot of support by the Office of Language Acquisition." (1A). One of the administrators also mentioned that her staff did not have a relationship with the central office, with the exception of a couple teachers. She shared, "I don't think they have much contact with central office folks. I know a couple of my teachers have an

intern provider. That is actually it. I don't think they have any...they are kind of removed from that." (10A). Another administrator, when asked about her staff's relationship with central office responded, "Right now they don't." (11B).

One of the central office staff members interviewed, believed that all the School Improvement Officers (SIO) had been of great support to the small schools on the site. He stated that his approach was to let the sites and their communities decide how to improve their schools. He felt that this was going to help the perception of the "top-down" approach and allow the staffs to take initiative and ownership.

The survey data, Tables 4.8 and 4.9 below, support the school staffs' statements about the lack of support from central office staff. This is also reflective of the staff's dissatisfaction with the lack of support from the central office around improvement efforts. The Tables specifically indicate how the staff felt about the level of change in support from the central office staff due to their program improvement status. At School A, 20% of respondents recognized the positive changes in support from the central office staff, 20% saw some negative changes in support received, and 60% of the respondents did not see any change overall.

At school B, 44% of the respondents recognized positive changes in the support received from central office staff, 5.6% saw some negative changes in support received and exactly 50% did not see any change at all. The items were based on a four-point-Likert-scale. One point indicates that participants strongly disagree and four points mean that they strongly agreed.

Table 4.8. School A District Support for Change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	14.3	20.0	20.0
	2	3	14.3	20.0	40.0
	3	9	42.9	60.0	100.0
	Total	15	71.4	100.0	
Total		21	100.0		

Table 4.9. School B District Support for Change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	29.6	44.4	44.4
	2	1	3.7	5.6	50.0
	3	9	33.3	50.0	100.0
	Total	18	66.7	100.0	
Total		27	100.0		

In summary, the staffs at both sites reported that they had many opportunities to share their opinions on all school related issues. The primary ways to communicate were through the weekly meetings, email, and face to face. They shared that the small school setting allowed for tight connections. The staff reported that they looked to the principals for expertise in reform efforts and bringing new ideas to the campus. All staffs claimed that they had little support from the district in planning and implementing strategies and interventions to improve student academic achievement.

Chapter Summary

The data analysis in Chapter 4 provided some insight about the processes two high schools in corrective action utilized to diagnose problems and identify solutions to address the problems associated with their schools' low academic performance. The data also provided insight about how the schools defined research evidence and how they utilized that evidence to implement changes during reform efforts to improve student

achievement. Furthermore, this chapter investigated how the staff members in each of the high schools engaged with one another and shared information, knowledge, and innovation through the social networks in place.

The findings indicated that the schools staff recognized there was a process for identifying problems and solutions. They shared issues in weekly meetings, the staffs analyzed data, discussed areas in need of improvement, discussed possible solutions, and came to consensus on the interventions to be implemented. The staffs appeared to use student performance data to identify problems, and reported that data was their evidence for selecting the solutions to the identified problems. The staffs did not report any use of educational academic research evidence in decision making related to strategies selection. The staffs indicated that they had good communication patterns at their schools. They shared that they had opportunities to give input through emails, at their meetings, and in person with each other and the principals. Staff members at both sites reported that the principal was the person on site they turned to for expertise and innovation. A few staff members stated that they attended off campus professional development. Staffs reported that there was some on-site professional development provided by their principal.

A review and discussion of the implications of the research's findings will occur in Chapter 5. The relevant themes that emerged from the research will also be discussed in the following chapter.

CHAPTER 5

Discussion and Recommendations

This chapter will discuss the findings of the study related to the process the two corrective action high schools engaged in to identify problems and solutions and their use of research evidence in reform efforts. Also investigated was how the social networks supported or hindered the flow of information, knowledge, and innovation throughout the schools. The findings and implications for policy, practice, and research will also be discussed.

Summary of the Findings

The qualitative findings of this study indicated that the staff members in the two corrective action high schools shared similar responses about the process they used for diagnosing problems and identifying solutions. Student assessment data was identified by staff members as their research evidence. They also reported that data was used for the purpose of identifying the academic areas in need of improvement and to identify solutions to address these areas. The findings also indicated that their social networks were heavily reliant on the principals as the main source for sharing information, knowledge, and innovation. The quantitative extant data substantiated the qualitative findings.

Research Question 1

What are the processes that schools in corrective action use to diagnose problems and identify solutions?

The findings for question one will address the structures and organizations used in the process, the types of problems the staff members identified, as well as how the

solutions to the problems were selected. Also examined was the personnel involved in the decision making process at the school level, and the degree to which the district assisted the sites in the process of identifying their problems and solutions.

Structures and organization

Analysis of the data revealed that the staff members, including administrators, from both of the corrective action high schools identified their weekly Tuesday meetings as the main forum for bringing up problems affecting their school's performance. This was also the forum for selecting solutions to the problems identified. The majority of staff members found this process to be suitable for collaboration around problem identification and discussion of solutions. Many of the solutions identified to address the problems were generated by staff.

Types of problems

The problems identified at both schools ranged from attendance, discipline, poverty, and teacher and student apathy. It was interesting to note that both of the corrective action high schools placed their students at the top of the list of reasons for their schools' underperformance. At School A the staff believed that the number one cause for the school's low performance was the disproportionate number of English learners and their lack of English language skills. School B believed that their school's underperformance was due to their students' lack of academic preparedness levels and behavior. The staff at this school felt that it was very difficult to teach high school material to students coming in 4-5 years behind grade level. In addition, staff members complained that students came to high school to socialize and to have a good time, and that the consequences for these behaviors were not enforced. This school also reported a

concern about their students' low English language levels, but it did not come up in the interviewees' responses as the main reasons for underperformance. Reflected in the individual interviews and again in the survey data, staff members, believed that their chances for exiting their Program Improvement status were slim at best.

How solutions were identified

The interviews revealed that it was common practice at both sites to analyze data on a regular basis to determine the areas of need and decide on solutions that would meet those needs. Some of the solutions identified by the schools to help improve student test scores were California High School Exit Exam (CAHSEE) interventions and after school tutoring. Saturday School and detention are examples of the solutions identified for behavior and attendance. The process for coming up with the solutions was consistent in structure but it did not appear to consistently result in alignment of problem to solution. This is how one of the staff members put it, "we try things, and they don't always work, but we keep trying things". Many of the ideas for solutions or 'things' appeared to be generated within the staff and were not necessarily research-based. It was noted that only a few staff members mentioned the formal documents written for program improvement when reporting on identifying problems and solutions.

Decision makers at the sites

The majority of the staff members at both schools felt that they had a voice in decision making. They reported having opportunities to share by serving on the various formal committees on site and in the informal sharing at the weekly meetings. Still others saw the ILT and the principal as the main decision makers. The role of the ILT at each site was to discuss possible solutions first and then bring them to the staff for further

input. The ILT members claimed that they did not meet on a regular basis. Many believed that despite the existence of the ILT and other committees, the principals were the final decision makers.

District involvement in identifying problems and solutions

The majority of the staff members from both of the schools did not believe that the district was supportive of their reform efforts. They felt that the district was quick to tell them that they needed to improve, but did not play a role in helping them identify the solutions. Many of the staff members also shared that they did not interact with the district staff directly and only received information from above through the principal. One of the administrators openly shared her frustration with the district's lack of direction and leadership in moving her school forward. There was an overall poor perception of the district's support towards school improvement.

Research Question 2

How do schools in corrective action define, acquire, use, and diffuse research evidence?

Definition of research evidence

Research evidence was defined by the staffs as student data such as state and district assessment results. The data were used to evaluate individual student's achievement towards grade level standards and also to measure the overall schools progress towards improvement as measured by state and federal measures. The interviews revealed that the staff members defined data as research evidence because the data informed their decisions for the interventions they put in place.

Acquisition, use, and diffusion of research evidence

Student data were accessed by teachers, as well as administrators at the sites, through the district's DataDirector computer program. This access appeared to be important to the staff members because it helped them keep track of student progress. These data are discussed together at meetings and also by the various teams on site, such as the ILT. Based on the data the staff identified interventions to help support student progress. When analyzing responses, the staffs appeared to use data to drive instruction but did not report the use of research to substantiate solution choices to remediate identified problems. They did not appear to delineate any difference between researched strategies and test scores. Data were also available to parents through the School Plan for Student Achievement (SPSA) and the School Accountability Report Card (SARC), documents which were posted on the district's website.

Research Question 3

In what ways and to what extent is information, knowledge, and innovation diffused throughout corrective action schools through social networks?

How information, knowledge, and innovation were shared

The main way in which the staff shared information, knowledge, and innovation with one another was through the weekly Tuesday meetings. Many of the staff shared that meeting at other times outside of the formal Tuesday meeting was limited. Some teachers claimed that they were the only teacher who taught a single subject matter. They had little opportunity to collaborate with others on common curriculum. Perhaps the most significant challenge was that even departments with more than one teacher did not share a common prep and therefore could not use this time to collaborate. Email was

reported as providing the staff members with the ability to connect with one another for the purpose of sharing important information, articles, and day to day business.

Perception of the existing social networks between staff members

Teachers, as well as the administrators, felt that the level of communication at their site was good. They believed that the Tuesday meetings and emails were the main ways to keep the information flowing throughout the school. The principals at both of the sites reported that much of their site operational issues were done through email. It was interesting to note that despite the fact that some of the staff members shared that they did not have many opportunities to collaborate with their colleagues, they also shared that the level of communication was good overall due to the Tuesday whole staff meetings, emails, and informal contact with one another.

Innovators at the site

According to the majority of the interviewees, the main innovators at the sites were the principals. The principals were the ones that brought relevant, outside information to the schools, such as research articles to share with the staff. They were also perceived as the experts and the staff members reported relying on them for their expertise. A couple of teachers reported visiting other teachers' websites to find out what they could learn to do differently in their classrooms that might help their students achieve at higher levels. Two other teachers also reported looking to other teachers for ideas and expertise.

Existing social networks between the schools and district office

The data indicated that the relationship between the central office and the school sites was not strong. Most of the teachers did not have any direct contact with central

office staff. They felt that most of the communication between the central office and their school took place through the principals at the site and then the information was disseminated to their level. Both principals shared that there was not consistent, on-going communication between the site staff and central office. One of the principals felt that there was not a strong working relationship even between her and the district staff. This information was consistent with how the staff felt about the district's lack of direction in finding solutions for their problems at the sites.

Through the analysis of the findings, some overarching themes emerged. These themes will be discussed in relation to the research questions and the current literature on Organizational Learning, Research Evidence, and Social Networks in the next section. The emergent themes that surfaced are the following. There is a lack of coherence between problem identification, solution, and implementation which may limit reform efforts. The schools focus on more single loop than double loop learning and as such this may inhibit their ability to improve. The social networks of the schools may be so reliant on one person (the principal) that the access to innovative knowledge from others may be limited. The identified themes will help frame the discussion of results.

Discussion of Results

Lack of coherence between problem identification, solution, and implementation may limit

Research has indicated that organizational learning is important in school reform. One of the important aspects of organizational learning in school reform is that it creates the capacity to effectively distribute knowledge and innovation throughout the entire organization (Fullan 2005; Penuel, Frank, & Krause, 2006). The tenets of organizational

learning support the idea that in order for schools to be successful, coherence between problem identification, solution, and implementation must be present.

It was evident, based on the data analysis, that the staffs felt that they had a consistent and open forum to communicate with one another around issues of performance at their schools. The existing structures supported the purpose of diagnosing problems and identifying solutions. However, the problems have persisted and both schools have made very little growth over the years. This observation leads to the assertion that although the staffs have a perceived process for identifying problems and solutions, there may be limited depth or quality to the substance in the process, as evidenced by the lack of improved student academic performance and continued advancement into corrective action status. One explanation for this finding may be the small size of the departments and lack of time and opportunities for coordinated professional work at a level that would impact practice

Organizational learning entails more than having a time and place to meet. It requires that the members of the organization engage in new learning, investigate new strategies, and seek innovation, in order for fundamental change to take place in practice resulting in increased student performance (Honig, 2004). This type of learning requires more than just sharing current practice, the staffs would engage in joint work to construct knowledge and to determine the best ways to implement instructional strategies and approaches that would lead to desired changes in student performance (Little, 1993; Chrispeels and Andrew, 2007). This approach would support addressing the persistent on-going problems at a deeper level (double-loop), rather than tackling them at a seemingly superficial level (single-loop).

Although the staff members believed that the Tuesday structure was in place for identifying the problems and solutions, the structure does not appear to support the kind of in-depth construction of knowledge needed for improvement. The existing structure did not allow for adequate time and opportunity to investigate, experiment, or evaluate new learning. This type of learning in reform should be an on-going process that is embedded in the regular teacher work day and work year (Little, 1993). The staff did not report engaging in any work at this level.

A point of interest that surfaced throughout a few of the interviews in school A, was that many teachers believed that their school carried a stigma and therefore only attracted a certain type of student. Staff members said that they were known as the “low performing school” because, unlike the other schools, they enrolled students all throughout the year. The staff said that many of the students they enrolled were from juvenile hall or straight from Mexico. They also reported that it was known as “the school that had all the English learners” due to the fact that they had the only ESL learning center on the entire campus. They found the enrollment process to be extremely unfair. This perception may be permeating their belief system about their abilities to impact academic achievement and therefore may be impeding their openness to tackling learning at an organizational level. Research indicates that school’s beliefs, morale and willingness to take on new learning appears to increase with improved student achievement, which is an important factor in school reform efforts (Almond, 2011). The sites’ feelings of lack of empowerment may be contributing to the low morale leading to the staffs’ apathy that was mentioned in a few of the interviews.

Limited use of research evidence may impede reform efforts

Although the NCLB law makes repeated references to the need for schools to use research evidence for school improvement, studies show that there is much ambiguity as to the meaning and use of research evidence in reform efforts (Honig & Coburn, 2008). The school staffs in this study also appeared to have a linear understanding of the term research evidence. The majority of staff referred to research evidence as student data, mostly as student scores. Data were said to help identify the gaps in their students' academic achievement. Data were purposeful for this first step in the process, but the next challenge was prescribing an effective solution to these problems that could lead to the schools meeting their desired goals. The breakdown appeared to be at this juncture. The data used assisted in identifying problems, however, there seemed to be no deliberate use of evidence in selection of solutions.

The staff addressed the gaps in achievement by implementing interventions such as Saturday School and after-school tutoring programs. However, they appeared to provide these supports without any change in the curriculum or approach in their practice. In referring to Nutley's, et al. (2003) components of knowledge, the schools seemed to "Know-what", the problem, but not necessarily the "know-how", Know-who", and "Know-why" of the problems and solutions. This gap, or breakdown perpetuated these sites' problems and the schools have continued to fall further behind.

It appeared that the schools use data and research evidence as synonymous terms without any qualifying differences. The staffs at both schools use data to drive instruction but they do not appear to use research in their implementation of strategies and interventions in instruction. They reported using data to identify problems and

solutions. They may be able to use data to identify areas of weaknesses, such as comprehension deficit, but the scores themselves would not be able to be used to select strategies that have been proven to work in remediating the identified problems. The staff did not appear to use research to assist in selecting strategies to teach students their needed skills.

Proven teaching methods that are grounded in scientifically-based evidence is one of the principles of the NCLB. The staff, however, did not refer to any implementation of proven teaching methods being used to address their performance problems at an organizational level, with the exception of Quality Teaching for English Learners (QTEL), which was a one-time training on how to teach English learners. Although the interview questions did not specifically ask about research strategies, the collective battery of questions on research evidence elicited responses that indicated that there was little evidence of the staffs sitting down to collaborate around researched strategies that may match their students' identified learning problems. With the many challenges these high schools face, it could be possible that the use of RE may be the missing and critical piece in these schools' reform efforts that may be getting in the way of real progress. In order to fill the knowing-doing gap, districts and schools may need to start by investigating how their organizations work as a whole (Nutley, Walter, & Davies, 2003).

Research in organizational learning states that there are two types of learning in which organizations engage. Single loop learning involves learning that exists within the current organizational belief system and double learning involves examining core beliefs, values, and norms. According to Argyris and Schon (1996) if an organization is to take

on true reform, it is necessary to engage in double loop learning. With the exception of PBIS and QTEL training, which according to interview responses were principal directed, the schools' use of research evidence in selecting solutions was limited. This may have contributed to the schools' recycling of strategies and interventions they used to remediate problems interfering with their students' achievement. Document review indicated that these schools have used many of the same interventions for the past few years.

The social networks of the schools may be so reliant on one person (the principal) that the access to innovative knowledge from others may be limited.

Research indicates that the use of social networks plays an important role in organizational performance, specifically in how communication, knowledge transfer, and innovation, is shared (Song, Nerur & Teng, 2007). Further research has concluded that networks can contribute or hinder a team's success in meeting desired goals (Ahuja, 2000; Borgatti & Cross, 2003). Having quality networks in corrective action schools would be beneficial in order to access and diffuse research and relevant information throughout the schools and for the schools to be able to receive this kind of information from the district and outside sources in a timely manner.

According to Hansen (1999) strong ties play an important role in transferring tacit, complex knowledge between individuals. The social networks at the school sites were perceived as effective by most of the staff members. They felt that the level of information shared at the staff meetings and through email were supportive of their work. Research also indicates that efficient structures are needed, as well as tight ties in an effective network system (Childress, Elmore & Grossman, 2006). Schools that have

structures or network devised for consistent, on-going collaboration are using strong networks with strong ties. The schools reported engaging in little formal collaboration. Their networks may be limited in supporting new learning. One possible explanation for this is the disciplinary nature of a high school setting. This is further compounded in these two cases by the one to three person departments due to the small school configuration.

An effective network has key people at the center of the network to disseminate accurate information efficiently (Daly, 2008). The staff at both sites believed that the principals were the innovators and experts on campus. They relied on them to bring in and share new information at the site. These principals were perceived as the main hub, the center, of receiving and diffusing information, knowledge, and innovation at the sites. This reliance on the principal for new learning might have created dependence and a lack of initiative to seek new learning in the staffs at these schools. This overreliance on one person at the site, even if it is the principal, may be contributing to their school's corrective action status.

Organizational learning supports the idea that all members must take on the responsibility of learning, sharing the learning, and working collectively toward desired goals (Honig, 2004; Mulford, 1998). It may be difficult for the schools to learn when they are so reliant on one person. The variety of data that can be accessed may be limited to the variety of research evidence that lies within the individual principal. This may inhibit the flow of research evidence. Although the staffs reported having ILT members that met with the principal to discuss school needs, it was reported that the information was principal directed.

It may be beneficial for the principal to create a system with multiple key players on site to help disseminate information throughout the school and the central ties would need to be well connected and supported by district and outside sources of information. In order to promote organizational learning at a high level, the principals could design quality systems, with strategic personnel in central positions, to efficiently keep the flow of information coming and going to the right people (Ahuja, 2000; Tsai & Ghoshal, 1998). This network could counter the isolation in the small departments created by the design of the small school model.

Research has indicated that organizations can benefit from strong ties within the organization and external ties to outside sources of information. External or weak ties can be the connections in which individuals or groups have contacts with a diverse range of disconnected others (Granovetter, 1973). These ties can provide a wide base of information sharing that allows for accessing many perspectives. The staffs at both these small schools reported that they had very little to do with the other five small schools on the same complex. Many staff members reported, including administration, that there was friction between the six schools. They expressed that there was also a level of competitiveness between them. Some even commented that they thought some of the schools on site were very 'exclusive' and did not care to develop a system for sharing knowledge between them. The lack of networks between the schools made them feel isolated, despite the close proximity on their campuses, and prevented teachers in similar disciplines from building networks.

External ties allow site personnel to keep informed on the most current best practices that can be disseminated through the strong ties within the school (Morris, Chrispeels & Burke, 2003). The limited connections to other sites and the over reliance on the principals as the main hubs of information may be impeding the potential for high levels organizational learning to occur. Research suggests that organizations that have a connected social network with effective strong and weak ties are able to sustain successful reform efforts towards desired change (McGrath & Krackhardt, 2003; Tenkasi & Chesmore, 2003; Granovetter, 1973). The untapped social networks within and between the schools in the complex may be limiting the flow of information, innovation, and expertise affecting the organizational learning that could help move the schools toward higher student achievement.

Conclusions

The findings in this study indicate that the staff members at the two high schools are working hard at dealing with the challenges they face as corrective action schools. Many shared feelings of being overwhelmed and frustrated because their attempts to improve were not significant enough to improve their schools' overall progress. They do not feel supported by the district and they also did not have strong ties with the other schools on site. This would imply that the schools are not capitalizing on all the resources, innovation, expertise, and knowledge available right in their own back yards. The structure of the small high schools mitigate against department teams collaborating significantly to improve instructional practices.

The corrective action schools did have a process for identifying problems and solutions. Identifying the problem was facilitated by the use of data. The break down for

determining solutions to the problems may have been in the informality of the process, the lack of structure to the collective search for solutions, and possible lack of sense of ownership of the problems. Staff selected strategies and interventions to implement based on teachers' suggestions, previous experience, or a staff member volunteering to run a program, and especially student data. From the results of this study, it can be concluded that a lack of coherence between problem identification, solution, and implementation may limit reform efforts.

Another conclusion that can be drawn from this study is that the schools appeared to engage in single loop learning more than double loop learning. This may inhibit their ability to improve. The schools in corrective action appear to need more time to participate in purposeful, organized, on-going professional development or collaboration during the year. They did not spend quality time collaborating on new learning or study of effective strategies for improvement found in the research. Although student assessments informed staff members about their students' performance, the data did not provide a roadmap to better teaching of skills and strategies. There also did not appear to be a school wide culture in which time to construct knowledge was dedicated during the staff meetings. The very informal structure of the meetings could be contributing to the lack of goal achievement at the sites.

A final conclusion from the study is that the school configuration may not be supportive of the English Learners and low socio-economic students on campus. The staff shared their frustrations in trying to meet the needs of these overrepresented vulnerable students populations assigned to their two schools. The two small schools were designed to take all the English Learner students and with this small school plan the

schools were the last to fill enrollment. This has inadvertently left the schools subject to high numbers of English Learners and at-risk students. It would be beneficial for the small school complex to re-examine the distribution of students on the complex. Students would benefit from strong curriculum and teaching practices, in addition to the modeling provided by heterogeneous populations with high performing academic students and English language role models in all classes. The fair distribution of students may help motivate teachers in their beliefs about their schools abilities to exit program improvement status.

The study findings on these two schools suggests that they are struggling with effective implementation of reform resulting in improved student achievement. The model in Figure 2.1, Theoretical Frameworks, in Chapter 2 purports that reform lies at the intersection of organizational learning, social networks, and use of research evidence. The findings in this study corroborate the underlying premise of this model. The model seems appropriate if all elements are present and purposefully addressed in the implementation aspect of reform efforts.

The schools appear to be making some effort towards improvement and are working on all the concepts presented in the model as evidenced by the interview responses and extant data. This balance of concepts, referred to in the model, however, needs to be approached in an intentional manner. For example, if the schools set aside time and structures to engage in constructing new knowledge together at a deep level, this may lead to higher levels of organizational learning. Using research evidence in these efforts would increase the likelihood of using effective strategies in the organization's learning. The desire to promote this learning throughout the organization would support

the development of efficient social networks necessary to reach all staff. This intentional focus on organizational learning could result in creating a culture where learning leads to higher levels of success in student achievement and positive effects on teacher morale. This cycle represents the continuous improvement cycle necessary for sustained reform. The schools in this study would benefit from starting with deepening their work as a Professional Learning Communities.

Implication for Policy

On the state and federal level it is recommended that assessments be reviewed for appropriateness for all student populations. Standardized assessments may not reflect English Learners' academic progress due to the second language demands. It is recommended that policy makers find measures that assess this population of students fairly and does not penalize schools for not meeting the same required expectations as their native English speakers. At the rate schools are entering program improvement status, the state and federal government may not be able to address all the schools in program improvement.

On the local level, districts would benefit from creating a network system that could support their schools. It is recommended that districts assess their current networks to see if there are holes in the connections for sharing information. Districts would be wise to purchase tools that assess the network systems in both the district and the schools. This may help in establishing efficient and effective systems for the flow innovation and expertise.

There appears to be a gap between the results of quality research and the implementation of that research into classroom practice. Districts may be able to play a

key role in filling that gap. It is suggested that districts invest in providing time for staff members at the school site level so that they may engage in sifting through the educational research available for the purpose of determining what programs/approaches/strategies to implement based on their school's context.

Implications for Practice

Schools in corrective action are faced with extraordinary challenges while working through reform efforts. The results of this study present some suggestions for practice. First, it is suggested that schools regularly assess and monitor their process of identifying problems and diagnosing solutions to be sure that they are meeting their desired outcomes. This may prevent the recycling of the same interventions without any marked improvement in student performance.

Secondly, schools may benefit from establishing or assessing current structures that support the flow of information, knowledge, and innovation among all of the staff members. This can be instrumental in deepening the organizational learning by accessing and spreading innovation and expertise. In addition they need structures for engaging in double loop learning which would lead to the implementation of strategies and interventions grounded in research.

Thirdly, research states that organizations learn when they have a balance of experience and new ideas in successful reform efforts. It is suggested that site leaders play a pivotal role in the school's social networks. The leaders could be the connection for the flow of information between the school and district, acting as the hub. In addition, it might be beneficial for the site leader to establish key players in the school's

social network to help disseminate new ideas, information, and expertise. This would create a broad network system so that all staff members could be well connected.

Finally, it is recommended that staff be provided opportunities for staff members at the site level to learn about and implement relevant educational research into practice that may have lasting beneficial effects in the overall school progress. It is important that all staff members, in particular classroom teachers, play a key role in decision making at the site level. Involving all staff members in the process of utilizing educational research to help improve student achievement can help establish and maintain a culture where on-going learning is embraced. Developing teacher leaders would enhance this process.

Suggestions for Future Research

This study presents three implications for further study. First, it might be profitable to conduct research in successful schools in an effort to ascertain whether there is a distinctively different process they use in identifying problems and prescribing solutions that support their academic achievement. At the organizational level, for example, further insight on how successful schools engage in new learning, investigate new strategies and seek innovation that results in increased student achievement can provide a model for struggling schools.

Secondly, more research is needed in schools that implement research evidence into their daily practice. The studies should seek out schools that use evidence effectively in improving their students' performance. These studies could provide models for schools, especially those in corrective action, on how to match data results with the right instructional practice. This topic is ripe for further investigation.

Finally, further research should be conducted on the ways in which school districts provide a support system for struggling schools such as the ones in this study. This could prove to be beneficial for both the school staffs and the central office in establishing better working relationships between the two for improved efforts in reform. Furthermore, it may also facilitate the flow of information, knowledge, and innovation in support of reform efforts at the school level through the extended social networks the district can provide.

Future studies should include the convergence of organizational learning, social networks, and district/schools' use of research evidence. The information derived from studying these areas can provide educators with valuable insights into how schools across America can implement reforms efforts effectively and successfully. Having effective schools with dedicated, well trained professionals, able to access, construct, and share best practices, could be the solution to closing the achievement gap and truly providing every child with a high quality education.

Closing Remarks

As a result of this study, the researcher has reflected on her own practice as a leader. One of the reflections applicable to practice is that learning has to be at the organizational level. It must be intentional, purposeful, and there should be conscious decisions about identifying problem and selecting solutions based on research evidence that leads to improved student achievement. This process and matching of strategies to problems should be regularly assessed to ensure continued student academic growth. Internalizing these lessons will help the researcher align her espoused theory to theory in use in order to promote quality teaching and learning that will touch the lives all students.

APPENDIX A

Interview Protocol: Corrective Action/Research Evidence

Personal background

What is your role in the school/district (e.g. teacher)?

How long have you been in the school/district?

What types of professional development/education have you in the last two years?

Identifying Problems/Causes

What is the process for identifying issues facing your school?

What do you think are the reasons for your school's underperformance?

Are there competing explanations for underperformance? What are these and which staff has the various views?

Has your school identified solutions to address any of these issues?

How were these solutions identified/selected?

Was this the typical decision-making process of your school?

What was the involvement of the district in identifying the problems and searching for solutions?

Developing Improvement Plans

What are the requirements of program improvement?

To what degree has your school met those requirements?

What was the district's role in developing your school's plan?

Did intermediary organizations or consultants play a role?

Research Evidence (Definition, Acquisition, Use)

What comes to mind when you hear the word 'evidence' related to school improvement?

How is evidence typically defined by your teaching colleagues/site administrators/district office?

Do you have a different understanding of the term 'research evidence'?

What types of evidence does your school use in decision-making related to reform?

If someone was going to persuade you about a schoolwide reform effort, what would you consider the most convincing evidence they could share?

Where does your staff go for expertise related to schoolwide improvement or reform?

What types of expertise do you have in your school that will help you move off corrective action?

What types of schoolwide reform strategies have gotten 'traction' within the school since your school went on Program Improvement?

Can you provide an example of a recent reform your school adopted, where that came from, and what evidence was used to support its adoption?

Are certain people more likely to share evidence relating to particular schoolwide strategies? What are their sources?

APPENDIX B

Document Review Protocol

Through review of selected documents, such as:

- School Site Plans
- School Improvement Plans
- District/Site Improvement Memorandums
- District and Site Staff /Department/Coaching Meeting Agendas
- District and Site Staff /Department/Coaching Meeting Minutes
- District Research and Evaluation Agendas/Meetings
- School Accountability Report Cards
- District Advisory Committee Reports
- School Site Council and School Board Reports/Minutes

We will code for:

- problem identification/root causes
- methods in which district/site administrators, school staff introduce reforms into discussions
- definitions of evidence
- forms of evidence district/site administrators, school staff consider
- forms of evidence district/site administrators, school staff choose
- methods through which evidence used in decision process
- forms of improvement efforts district/site administrators, school staff enact
- district/site administrators, school staff interactions regarding evidence
- district/site administrators, school staff patterns of evidence use
- district/site administrators, school staff evaluation/refinement of evidence

APPENDIX C

Informed Consent

This research study by Minerva Salas, principal investigator and doctoral student, through the University of California, San Diego, is being conducted to better understand Program Improvement under No Child Left Behind. You have been asked to participate in this study because you have experience in a program improvement school/district. Two high schools will be included in this study, and approximately 10 individuals will be interviewed from each site. The contents of the interview will center on the process your school uses to identify problems and solutions and the evidence used to support decision making towards improvement.

Your voluntary participation involves an interview that will take approximately 45 minutes that will be audio taped. Participant responses will be kept in a confidential manner. All data collected in hard copy form will be kept secured in a locked filing cabinet. Electronic files will be kept secure through password-protection on the investigator’s computer. Neither hard copy nor electronic documents will contain names or identifiers. Names will be identified by random numbers and kept under lock and key. Only summarized and non-identifiable data will be presented at professional meetings or in any publications.

While every effort is made to reduce risk, there exists a possibility of a loss of confidentiality in this study and feelings of discomfort. In addition, there may be some unknown risks that are currently unforeseeable. You will be informed of any significant new findings should they arise in the course of the study.

Although there are no immediate benefits to you for participating, this study may potentially benefit educators enacting better improvement strategies and legislators in creating more responsive educational policy. Your participation in this study is completely voluntary. You are free to not participate or withdraw at any time, for whatever reason without penalty.

You should know that the Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews only focus on the researchers and the study, not on your responses or involvement. The IRB is a committee that reviews research studies to make sure that they are safe and that the rights of the participants are protected.

By signing below you indicate that the researcher has explained this study, answered your questions, and that you voluntarily grant your revocable consent for participation in the study. If you have additional questions or need to report-research related problems you may contact Minerva Salas at 619.370.3823 or my faculty advisor, Dr. Alan Daily (858) 622- 8472. You may also call the Human Research Protections Program at (858) 455-5050 to inquire about your rights as a research subject or to report research related problems.

I agree to participate in this research study.

Participant’s Name

Date

Participant’s Signature

Researcher’s Signature

APPENDIX D

Audiotape Recording Release Consent Form

As part of this project, an audiotape recording will be made of you during your participation in this research project. Please indicate below the uses of these audiotape recordings to which you are willing to consent. This is completely voluntary and up to you. In any use of the audiotapes, your name or affiliation will not be identified. You may request to stop the taping at any time or to erase any portion of your taped recording.

1. The audiotapes can be studied by the research team for use in the research project.

Initials

2. The audiotapes can be used for scientific publications.

Initials

3. The audiotapes can be reviewed at meetings of scientists interested in the study of Program Improvement under No Child Left Behind.

Initials

You have the right to request that the tape be stopped or erased during the recording.

You have read the above description and give your consent for the use of audiotapes as indicated above.

Signature Date

Witness Date

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